

CHAPTER 4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVE

4.1 CHAPTER OVERVIEW

Impacts are analyzed for the following park resources: the physical and natural environment, socioeconomics, cultural resources, and visitor experience/park operations. Physical environmental impacts include effects from site preservation and rehabilitation activity on air and water quality, soils and geology, noise, and energy requirements/conservation. Natural resource impacts include effects of site preservation and rehabilitation activity on vegetation and wildlife, wetlands and floodplains, ecologically critical areas, and RTE species. Impacts on the socioeconomic environment result from the local and regional economy, including likely changes in employment, educational, and recreational activities. Impacts of the alternatives on cultural resources involve how site preservation and rehabilitation would affect historic structures, landscapes, and ethnographic resources. For visitor experience and park operations, the EA analyzes the effectiveness of the alternatives in conveying an understanding of the interpretive themes through the varying levels of facilities and programs and the effects of the alternatives on park operations.

Chapter 4.0 describes and analyzes potential environmental impacts associated with the No Action Alternative and the Preferred Alternative as presented in Chapter 2.0. Chapter 4.0 also describes the methodology used to analyze impacts and potential environmental consequences of each alternative.

4.1.1 Statutory Requirements

Primary laws and guidance documents that guided the development of this EA are:

- Antiquities Act of 1906, as amended (16 U.S.C. 431-433) – Authorizes the President to declare national monuments, historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest.
- National Park Service Organic Act of 1916 (16 U.S.C. 1-4, et seq.) – Created the National Park Service to promote and regulate the use of national parks, monuments, and reservations, by such means and measures as to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the land in such manner as will leave them unimpaired for the enjoyment of future generations.

- The National Historic Preservation Act of 1966 as amended (16 U.S.C. 470) – To protect and preserve historic districts, sites and structures, and archeological, architectural and cultural resources. Section 106 and Section 110 (36 CFR 800) respectively require consultation with the State Historic Preservation Office and that NPS nominate all eligible resources under its jurisdiction to the National Register of Historic Places.
- The National Environmental Policy Act of 1969 – Public Law 91-190 established a broad national policy to improve the relationship between humans and their environment and sets out policies and goals to ensure that environmental considerations are given careful attention and appropriate weight in all decisions of the federal government. This legislation requires and guides the preparation of this EA.
- National Park Service Regulations and Policies – Actions proposed in this document are subject to the NPS Director's Order #28 (Cultural Resource Management), Director's Order #2 (Park Planning), Director's Order #24 (NPS Museum Collections Management), Director's Order #12 (Conservation Planning, Environmental Impact Analysis, and Decision-making), and Director's Order #77 (Natural Resource Protection). Actions are also subject to the service-wide policy document, Management Policies (2001).

4.1.2 Methods for Evaluating Environmental Effects

The method of analysis of potential effects is based on the *Director's Order #12 Handbook* [sec. 5.4(F)]. Four categories of effects are considered: direct effects, indirect effects, cumulative effects and impairment. The context, duration, and intensity of the impacts must also be defined. Intensity of effects and thresholds of significance are defined for both beneficial and adverse effects. These are further defined in Section 4.1.2.2.

Where quantitative data were not available, best professional judgment was used to determine impacts. In general, the thresholds used come from existing literature, consultation with subject experts, and appropriate agencies.

TUAI's resource management objectives and goals, as stated in Chapter 1.0 - Purpose and Need for Action, were integrated into the impact analysis. The impact analysis evaluates each

alternative to determine whether it would contribute substantially to the park's achievement of its resource goals, or would be an obstacle.

To analyze impacts, methods were selected to predict the potential change in park resources that would occur with the implementation of each alternative. Evaluation factors were established for each impact topic to assess the changes in resource conditions of the alternative. The study area was defined to include resources within TUAJ and the region that might reasonably be affected by the alternatives. Because resources vary in function and relation to environmental factors, the study area was defined independently for each impact topic (see impact topic sections under Section 4.2).

4.1.2.1 Impact Categories

Four impact categories are used in this analysis and defined below.

Direct Effects - Those impacts occurring from the alternative at the same time and in the same place as the action.

Indirect Effects - Those actions caused by the alternative that cause impacts to a resource or condition that occur later in time or farther in distance.

Cumulative Effects - The Council on Environmental Quality (CEQ) regulations to implement NEPA require the assessment of cumulative effects in the decision-making process for federal projects. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

Cumulative impacts were determined by combining the impacts of each alternative with past, ongoing, and reasonably foreseeable future actions in the study area. A synopsis of other ongoing or reasonably foreseeable future projects at TUAJ and where applicable in the surrounding region are described in Section 4.1.3.

Impairment - The NPS *Management Policies 2001* requires an analysis of potential effects to determine whether or not actions would impair park resources. The primary purpose of the NPS, as established by the Organic Act and reaffirmed by the General Authorities Act, as amended, is to conserve park resources and values. Impacts to park resources and values are allowed when

necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Impairment is an impact that would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

An analysis was conducted to determine whether the magnitude of impacts identified for specific impact topics reached the level of “impairment,” as defined by NPS *Management Policies*. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or identified as a goal in the park’s general management plan or other relevant NPS planning documents.
- An impact would be less likely to constitute impairment to the extent that it is an unavoidable result, which cannot reasonably be further mitigated, of an action necessary to preserve or restore the integrity of park resources or values.
- Impairment may occur from visitor activities; NPS activities in the course of managing a park; or activities undertaken by concessioners, contractors, and others operating in the park.

4.1.2.2 Impact Definitions

Each potential impact is described in terms of its context (site-specific, local, or regional), duration (short-term or long-term), and intensity (negligible, minor, moderate, or major). For the purposes of analysis, the following definitions are used for all impact topics:

Duration

Short-term impacts: Impacts that might occur during the implementation of the alternatives at TUAJ or in the short-term (1 to 6 months) after implementation.

Long-term impacts: Those impacts occurring from the preservation and rehabilitation of TUAJ through the next 10 years.

Intensity

Negligible: Impacts would have no measurable or perceptible changes to the resource.

Minor

Adverse: Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the resource would not be affected and, if left alone, would recover.

Beneficial: Resource improvement would be perceptible, but barely, and localized within a small area of TUIAI.

Moderate

Adverse: Impacts would cause a change in the resource; however, the impact would remain localized.

Beneficial: Resource improvements would be measurable, enhancing the viability of the resource within TUIAI.

Major

Adverse: Impacts to the resource would be substantial, highly noticeable, and permanent.

Beneficial: Resource improvements would be substantial, enhancing the viability of the resource within TUIAI, the surrounding community, and beyond.

4.1.3 Non-Project Actions Contributing to Cumulative Effects

Future Projects at TUIAI

Tuskegee Airmen National Center

The Tuskegee Airmen National Center (TANC) would provide the story of the Tuskegee Airmen, emphasizing the past, present, and future of military aviation and training; include a full-scale military museum, major exhibits with period military aircraft and equipment similar to those used by the Tuskegee Airmen in World War II, audiovisual presentation and interactive exhibits and programs; contain the Charles Alfred Anderson Department of Aviation Science; and eventually contain visitor contact information and orientation for the entire site, with a Tuskegee Airmen Memorial in the form of a Wall of Honor that would include a list of the names of all Tuskegee Airmen as well as a statue of “Chief” Anderson.

The TANC would be located close to the principal welcome and orientation areas and the Tuskegee Airmen Memorial. The Tuskegee Airmen, Inc. (TAI) portion of the TANC may be located west of the unnamed tributary that runs through the property. The site can accommodate the Airfield Operations component of Tuskegee University. If Tuskegee University elects to locate this component on the site, it would be separated visually and physically from the HCA so as to not interfere with the visitor understanding of this historic component of the site. Vehicle access and parking can be an extension of the primary public access system instituted by the NPS, with service access available from the southeast.

Although the development of the TANC is part of planning for future development of the park and not part of the proposed action, the design for the Preferred Alternative was required to accommodate potential locations for this facility and its associated amenities and to plan for this later addition to the park (Hartrampf 2004a).

Future Projects in the Region Surrounding TUA I

Proposed improvements to Moton Field Municipal Airport include extending the runway from 5,000 feet to 6,500 feet, installation of navigational aids, updating the Airport Master Plan Study, and performing various other studies. In 2003, the FAA gave the city of Tuskegee an Airport Improvement Plan (AIP) Grant of \$100,000 to complete the installation of navigational aids, to update the *Master Plan*, and to conduct environmental studies. The proposal for the runway improvements and extension has been submitted and approved by FAA; however, funds have not been allocated. The improvements proposed at the Moton Field Municipal Airport would be beneficial to the proposed actions at TUA I. The runway extension would allow aircraft to land and take off with more fuel, which would allow longer travel distances to and from Moton Field Municipal Airport. Improving the capabilities of the airport's runway may increase the number of visitors exposed to TUA I in the future.

There are no transportation projects scheduled by Alabama DOT in the vicinity of TUA I within the next five years that would cumulatively add to the impacts of the Preferred Alternative. However, I-85 improvements are planned in the long-term to provide a new access route to TUA I, or improve existing routes, to ease traffic congestion that may result from increased park visitation.

It is not expected that the Preferred Alternative discussed in this EA would produce significant environmental impacts. Nor is it expected that the effects of the Preferred Alternative, when

added to the effects of other proposed projects in the region, would cause impacts that would exceed thresholds of significance.

4.2 GENERAL ENVIRONMENTAL EFFECT

All lands within the current boundaries of the park are managed as a cultural resource. As such, the physical, chemical, and biological resources located on the park are maintained to reflect the attributes most associated with the historic significance of the site. Notable changes to the existing environment from the Preferred Alternative would include building restoration and rehabilitation, vegetation removal necessary to fulfill specific purposes identified in the establishing legislation of the park, and landscaping to reflect the landscape during the period of significance.

4.2.1 Physical Environment

This section discusses the impacts of the alternatives on the physical environment including geology and soils, water quality, floodplains, and air quality.

4.2.1.1 Geology and Soils

Methodology

Alternatives were evaluated to assess potential impacts to soils and geological resources. The study area includes the boundaries of TUAJ.

No Action

The site would remain in its current use, and no action would be taken; therefore, there would be no impact to soil since there would be no new construction (i.e., parking areas), no vegetation removal, no stormwater management facilities would be constructed, and the historic pond would not be excavated.

Preferred Alternative

No impacts to geology are anticipated as a result of the implementation of the preferred action; however, soils at the site would be affected. The impact to soils would be localized to the site and would not be major at a regional level. Movement of soil would take place to remove

vegetation at the site and construct the new parking area and stormwater management facilities. The excess soil generated by implementation of the Preferred Alternative would be stockpiled onsite for later use.

During the movement of soil and construction activities, the potential for erosion and sedimentation into nearby stormwater culverts and waterways exists. This potential would be minimized through the use of sediment and erosion control measures as required by local or county regulations. The historic pond onsite has filled with sediment and would be excavated. Overall, the construction phase of this project is expected to create minor and temporary impacts. These impacts would be short-term in nature, lasting for the duration of construction activities.

Cumulative Impacts

No negative cumulative impacts to geology and soils are associated with the No Action Alternative. No negative cumulative impacts to geology and soils are associated with the Preferred Alternative, when added to the effects of other proposed projects in the vicinity of TUAI.

Conclusions

Impacts to park geologic features are negligible and are not detectable based on standard scientific methodologies.

However, soils at the site would be affected by the implementation of the following components of the Preferred Alternative: removal of vegetation, construction of the new parking area, excavation of the pond, and stormwater management facilities. The potential for erosion and sedimentation into nearby stormwater culverts and waterways would be minimized through the use of sediment and erosion control measures as required by the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 (Alabama SWCC 2003). The No Action Alternative would not impact geology or soils at TUAI. No impairment of park resources would result from either alternative.

4.2.1.2 Water Quality

Methodology

Actions associated with construction and implementation of the alternatives were evaluated to assess potential for impacts. Neither alternative proposes actions within waterbodies. Potential for significant changes to runoff quantity and quality were evaluated. Construction methods were also addressed.

The study area includes the region surrounding TUAJ in order to address potential water quality impacts to streams located downstream of the site.

No Action

No alterations to TUAJ would occur under the No Action Alternative. Currently, the historic drainage system is not actively maintained at the site so the potential for flooding exists as most structures are clogged or silted. The historic pond has filled in with soil. The currently failing stormwater management and drainage structures would not be repaired or rehabilitated and, therefore, no improvements or further degradation to the water quality of the tributary or creek are anticipated as a result of the No Action Alternative. The benefits to water quality that may occur by upgrading the stormwater and sewer systems for the Preferred Alternative would not be realized with the No Action Alternative.

No impacts to groundwater are anticipated as a result of the No Action Alternative.

Preferred Alternative

Groundwater

No impacts to groundwater are anticipated as a result of the Preferred Alternative.

Surface Water – Proposed Stormwater Management

Site improvements and utilities, including site drainage improvements of the TUAJ site, were proposed by Hartrampf, Inc. as part of the 100 percent design submittal (Hartrampf 2004b). These drainage improvements include stormwater management pond sites and improvements to the HCA storm sewer system at the site. The project team, including NPS and their consultants,

met with staff from the Mobile District Corps of Engineers to discuss proposed plans for the stormwater management ponds. The final proposal for stormwater management, based on Hartrampf (2004b) and consultation with USACE, is presented in the following paragraphs.

Hartrampf's design team recommended creating two detention ponds to contain increases in stormwater runoff. One is needed to collect runoff from the new Visitor Services Area, and one would be placed within the HCA to improve drainage. The historic pond, once located south of Chief Anderson Drive and Hangar Number Two and used for fire-fighting purposes, would not be used as a stormwater detention pond. It was also recommended to remove vegetation and debris blocking the flow of the existing creek, and to rechannelize the creek to a standard typical section to facilitate future maintenance (Hartrampf 2004b).

Since all drainage structures in the HCA are in need of repair, the design team recommended replacing the drainage system with a modern storm sewer network. The new drainage system would closely follow the layout to have the least impact on the historic resources. The team also recommended that the existing valley gutter located along the ridge behind the Skyway Club and along the east side of the entrance road be used for its original, historic purpose, which was to prevent stormwater from entering the HCA by diverting it to drainage structures (Hartrampf 2004b).

All proposed stormwater management techniques would improve the current surface water quality and control additional stormwater runoff from the newly developed impervious areas. Improvements to protect water quality would be constructed using standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 (Alabama SWCC 2003).

Federal and state regulations regarding discharges of stormwater require operators/owners to apply for and obtain a NPDES permit prior to conducting regulated construction disturbance activities (Alabama DEM 2004c). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained. A CBMPP is required to be submitted with the request for registration for proposed discharges to a Tier 1 waterbody(s), proposed discharges to an Outstanding National Resource Water (ONRW) designated waterbody, and for projects involving waterbody relocation or significant alteration. The CBMPP would be prepared using standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 (Alabama SWCC 2003).

“NPDES Construction Site” means construction activities that are required to obtain NPDES permit coverage. An NPDES Construction Site is construction that disturbs 1 acre or greater or will disturb less than 1 acre but is part of a larger common plan of development or sale whose total land disturbing activities total 1 acre or greater. An NPDES construction site also includes construction sites, irrespective of size, whose stormwater discharges have a reasonable potential to be a significant contributor of pollutants to a water of the State, or whose stormwater discharges have a reasonable potential to cause or contribute to a violation of an applicable Alabama water quality standard as determined by the Department.

The construction activities proposed for the site total more than 1 acre in size and, therefore, a stormwater permit is required. Permit 498 (NPDES Construction, Noncoal/Nonmetallic Mining and Dry Processing Less than Five Acres, Other Land Disturbance Activities Application Form, Notice of Registration), Permit 499 (NPDES Construction, Noncoal Mining and Dry Processing Less than Five Acres Stormwater Registration Termination Request and Certification Form), and Permit 500 (NPDES Construction, Noncoal Mining and Dry Processing Less than Five Acres Stormwater Inspection Report and BMP Certification Form) are required to be submitted by the NPS.

Cumulative Impacts

No negative cumulative impacts to water quality are associated with the No Action Alternative or the Preferred Alternative. Current and planned development activity in the Tuskegee region is limited. Although the region could experience cumulative effects to water quality (stormwater runoff and increased impervious surface area) due to multiple ongoing roadway and development projects, the Preferred Alternative and other ongoing or future projects in the region each account for a small fraction of these effects.

Indirect impacts may occur such as increased regional traffic and development, which would increase impervious surface, stormwater runoff, and nonpoint sources of pollution, and would also be accompanied by increases in population and employment opportunities, resulting from the Preferred Alternative. These potential development activities would also be regulated by Alabama DEM in accordance with the above cited water quality management regulations.

Conclusions

For the Preferred Alternative, the rehabilitation of the historic pond and some vegetation removal may occur within the 100-year floodplain. In addition to vegetation removal, which would increase stormwater runoff in the short-term until new plantings were re-established, an increase in impervious surface at the site would result in increased runoff. However, the impacts to surface water would be negligible as stormwater management systems would be installed and upgraded to control runoff, erosion, and sedimentation.

Potential erosion from the removal of vegetation at the site would be detectable but would be well below water quality standards or criteria and within historical or desired water quality conditions. Overall, the construction phase of this project is expected to create minor and temporary impacts. These impacts would be short-term in nature, lasting for the duration of construction activities. Additionally, the No Action Alternative would not result in impacts to water quality; therefore, no impairment of park resources would result from either alternative.

4.2.1.3 Floodplains

Methodology

Maps prepared by the Federal Emergency Management Agency (FEMA) illustrating floodplain areas at TUAI were used to identify baseline conditions within the study area. Maps depicting the footprint for the Preferred Alternative were overlaid on the floodplain area maps to identify direct impacts to floodplains. Indirect impacts were assessed by reviewing activities outside floodplains and assessing the potential for impacts to the floodplain areas.

No Action

Existing development within close proximity to the 100/500-year floodplain and certain developed areas within the HCA are prone to flooding. However, no further development or alterations to the site would occur with the No Action Alternative. The site would remain in its current use; therefore, there would be no impact to floodplains at the site.

Preferred Alternative

Floodplain Zones as mapped by FEMA are located within the site boundary and include zones A12, B, and C. Most of the work proposed to preserve and rehabilitate the HCA would occur

outside of the 100-year floodplain. However, some vegetation clearing activities, rehabilitation of the historic pond and plane tie-down area, and construction of a storm water pond would occur in zones B and A12 of the 100-year floodplain.

The *Director's Order #77-2: Floodplain Management* does not apply to historic or archeological structures, sites, or artifacts whose location is integral to their significance or to certain actions as specifically identified in *Procedural Manual #77-2: Floodplain Management*. Actions in the floodplain would alter some of the impervious area in the floodplain; rehabilitation of the historic pond and plane tie-down area is necessary to return the landscape to the period of significance of the Tuskegee Airmen. Construction of a stormwater pond in the floodplain would also alter the floodplain; however, it would provide water management functions consistent with location in the floodplain. The vegetation removal is necessary to rehabilitate the historic landscape, but new vegetation appropriate to the historic period of significance would be planted, maintaining the area as a vegetated area. Best Management Practices (BMPs) would be required during construction to minimize impacts of pond construction and vegetation removal to the floodplain.

No mitigation is required for impacts to the floodplains in areas where historical or archeological exceptions exist as defined in *Procedural Manual #77-2: Floodplain Management*.

Cumulative Impacts

No negative cumulative impacts to floodplains are associated with the No Action Alternative. No negative cumulative impacts to floodplains are associated with the Preferred Alternative, when added to the effects of other proposed projects in the vicinity of TUAJ. Implementation of the Preferred Alternative would have no impact on floodplains and therefore there would be no increase of cumulative effects on floodplains in the region.

Conclusions

Short-term, minor impacts to floodplains would be related to construction of the historic pond and plane tie down area, and vegetation removal for historic landscape rehabilitation. Long-term impacts of the vegetation removal would be negligible as the area would be re-vegetated according to the landscape plan and the area would continue to function as a floodplain. The stormwater pond, designed to provide stormwater management, would provide long-term moderate benefits to floodplains by protecting the floodplain outside the pond from stormwater flow from the HCA. The stormwater pond would temporarily detain stormwater, preventing it from flooding adjacent areas in the floodplain already prone to flooding during storm events.

Because no negative impacts to floodplains would result from either alternative, there would be no impairment of park resources.

4.2.1.4 Air Quality

Methodology

In order to assess air quality impacts resulting from a given management alternative, the following methods and assumptions were used:

1. The National Ambient Air Quality Standards (NAAQS) were examined. There are no state/local air quality standards.
2. Air quality designations for the surrounding area were determined; the park is in an area that is designated as attainment for all NAAQS pollutants.
1. The nearest air monitoring location is approximately 35 miles east in Phenix City. The values for PM₁₀ and O₃ at this monitoring station in 2003 were all below the NAAQS; therefore, the maximum concentrations in the park for these pollutants are assumed to be below the NAAQS.
4. Any reductions in the pollutants resulting from implementing control strategies (mitigation measures) were taken into account, as were changes in the pollutants resulting from increased or decreased activities.
5. The air quality impacts of the alternatives were assessed by considering the existing air quality levels and by estimating air emissions generated by the park.

No Action

The No Action Alternative does not include the rehabilitation or preservation of TUA I. TUA I is within Macon County, which is currently in attainment with U.S. EPA air quality criteria for all six pollutants. The site would remain in its current use, which does not emit substantial quantities of air pollutants. For example, the only sources of air emissions at the site are motorized equipment used for ground maintenance and motor vehicles operating for short distances on roadways and parking lots on the site. No additional action would be taken at the federal level; therefore, there would be no impact to air quality at the site.

Preferred Alternative

During the short-term construction phase of the project, the operation of construction equipment would generate some criteria pollutant emissions, including carbon monoxide, nitrogen oxides, and particulate matter. However, these emissions would be minimal since the proposed construction activities are temporary. Short-term fugitive dust emissions would be generated primarily due to land-disturbing activities to remove the vegetation and install the new parking area. The amount of PM₁₀ should not be expected to be high due to the short duration and small size of construction activity and can be mitigated by using control techniques such as wet suppression and truck bed covers for construction vehicles hauling soil. Overall, the construction phase of this project is expected to create minor and temporary impacts. These impacts would be short-term in nature, lasting for the duration of construction activities.

Visitors' vehicles would be the principal source of emissions that would impact air quality. In order to assess this potential impact, vehicle emissions were estimated based on estimated annual visitation levels and vehicle emission factors. Potential annual visitor use was based on data from a March 2000 economic impact study (ABTT 2000) that estimated four levels of visitor market penetration. Vehicle emission factors were generated using the EPA *MOBILE6.2* model that assumed a southeastern climate. Additional assumptions included a visitor per vehicle ratio of 2.8 that is typical of other NPS visitor surveys and a distance traveled of 10 miles per vehicle in the immediate area of the park. These data and emission estimates are summarized in Table 4-1.

Table 4-1: Projected Vehicle Emissions from Park Visitors

Market Penetration	Visitors ¹	Visitors Vehicles ²	Vehicle Miles Traveled (VMT) ³	Emissions (tons/year)			
				NO _x	CO	VOC	PM ₁₀
25 Percent	226,370	80,846	808,465	0.88	9.36	0.86	0.81
50 Percent	452,745	161,695	1,616,945	1.77	18.73	1.73	1.62
75 Percent	679,117	242,542	2,425,420	2.65	28.09	2.59	2.43
100 Percent	905,489	323,389	3,233,890	3.54	37.46	3.45	3.24

¹ Source: Reference ABTT 2000

² Assumes 2.8 visitors per vehicle.

³ Assumes that each vehicle travels an average of 10 miles on and around the site.

In 1999, the latest year for which data are available, EPA reported the following emission totals for Macon County: NO_x (3,257 tons), CO (22,694 tons), VOC (2,479 tons), and PM₁₀ (4,436

tons). The data in the above table indicate that the pollutant additions for even the highest estimated visitation market penetration would not exceed one-half of one percent (0.5 percent) of the totals generated by the entire county.

Cumulative Impacts

No negative cumulative impacts to air quality are associated with the No Action Alternative. No negative cumulative impacts to air quality are associated with the Preferred Alternative, when added to the effects of other proposed projects in the vicinity of TUA I.

Conclusions

Based on the emission results, the Preferred Alternative would have negligible impacts from additional emissions. There would be no impairment of park resources resulting from either alternative.

4.2.2 Natural Resources

This section discusses the impacts of the alternatives on natural resources including vegetation (upland plant communities and exotics), wildlife, wetlands, ecologically critical areas, and RTE species.

4.2.2.1 Vegetation

Methodology

Maps illustrating vegetation cover within TUA I were used to identify baseline conditions within the study area. The following sections were developed from information included in the *100 Percent Design Analysis* (Hartrampf 2004b) concerning vegetation removal to rehabilitate the site to its historic landscape. The following discussion on vegetation and wildlife pertains to the lands currently owned by NPS, which includes the HCA and the proposed Visitor Services Area (Figure 3-1).

No Action

The No Action Alternative would not alter the vegetation resources at TUA I. As a result, the vegetation community at TUA I would remain in its current state, including native and invasive

species. The existing forested areas, open meadows, and other plant communities described in Section 3.2.1.1 would remain intact. No control or removal of invasive species, which cover an extensive portion of the vegetated areas of the site and would most likely overtake native vegetation if left unattended, would be performed with the No Action Alternative.

Preferred Alternative

Upland Plant Community

Impacts to vegetation would occur if the site were converted back to the 1944 landscape plan. The Preferred Alternative would be based on the 1944 landscape plan for the HCA, but would be modified slightly to eliminate invasive species, to protect the historic buildings, and to minimize landscape maintenance. D.A. Williston's 1944 landscape plan would be maintained where several historic plantings still exist, such as the existing row of crape myrtles that line Chief Anderson Drive, and would be re-instated where plantings currently do not resemble the original plan. Weeds would be eradicated from the historic concrete surrounding the historic buildings. Enhancement plantings would be added to areas that may not have been previously landscaped, such as screening vegetation to shield the view of the Moton Field Municipal Airport from the HCA, as well as the area near the historic retention pond (Hartrampf 2004b).

To return the HCA to the period of significance, most of the existing trees and shrubs outside of the HCA would be removed since the site is overgrown, and open meadows would be planted with native grass species, similar to the original 1944 landscape plan, excluding invasive species such as honeysuckle, mimosa, privet, and wisteria. The hillside between the Overlook Area and the HCA would be cleared, except for large trees that do not obstruct the viewshed, and native grasses would be planted in order to provide a clear view of the site from the Overlook Area. Proposed landscaping within the Visitor Services Area includes planting shade trees, evergreens, ornamental trees, shrubs, and groundcover scattered among the proposed structures.

The wooded habitat at TUAJ located along the unnamed tributary to Uphapee Creek would be retained as a 50-foot vegetative buffer on both sides. Additionally, any vegetation in wetland areas would be retained as a buffer and protected from future disturbance. Vegetation removal would be performed without the use of machinery within a 6-foot perimeter around all historic features, such as the remaining historic curb and gutter and the artesian well system (Hartrampf 2004b).

Invasive Species

As part of the Preferred Alternative, invasive plant species removal would occur to convert the site back to the historic landscape. Invasive species onsite have been described and mapped as either moderate or extensive and these vegetated areas would be managed as part of the Preferred Alternative (Pond & Company 2002a) (Figure 3-2). Following the rehabilitation of the site and removal of invasive species, native species would be planted to return the site to the level, open terrain of the site in the early 1940s.

Control and management of invasive species populations is best accomplished using an integrated pest management (IPM) approach as approved by the National Invasive Species Council, established by Executive Order 13112 (National Agricultural Library 2004). The IPM approach considers best available scientific information, updated target population monitoring data, and the environmental effects of control methods in selecting a range of complementary technologies and methods to implement to achieve a desired objective. These methods may include: (1) cultural practices (e.g., crop rotation, revegetation, grazing, and water level manipulation); (2) physical restraints (e.g., fences, equipment sanitation, and electric dispersal barriers); (3) removal (e.g., hand-removal, mechanical harvesting, cultivation, burning, and mowing); (4) the judicious use of chemical and biopesticides; (5) release of selective biological control agents (such as host-specific predator/herbivore organisms); and (6) interference with reproduction (e.g., pheromone-baited traps and release of sterile males). Often several methods are used within an overall integrated strategy. Consideration of the environmental impacts of control actions requires that environmentally sound methods be available and judiciously deployed, especially in highly vulnerable areas.

Cumulative Effects

No negative cumulative impacts to vegetation are associated with the No Action Alternative. No negative cumulative impacts are associated with the Preferred Alternative to vegetation, when added to the effects of other proposed projects in the vicinity of TUA I. Current and planned development activity in the Tuskegee region is limited and there is an extensive amount of vegetated land surrounding TUA I. Although the region could experience habitat loss due to multiple ongoing roadway and development projects, the Preferred Alternative and other ongoing or future projects in the region each account for a small fraction of available habitat and the cumulative effects would not exceed thresholds of significance.

Conclusions

Impacts to the plant community include major adverse impacts from the extensive removal of woody vegetation and moderate beneficial effects from the management and removal of invasive species and restoration of native species. Invasive species would be removed or managed where possible, improving habitat for native species. Native species would be planted in place of invasive species to return the site to the level, open terrain of the site in the early 1940s. No removal of vegetation beyond what is required for historic resources would be performed. Forested buffers would remain along the unnamed tributary and around wetland areas. For the Preferred Alternative, vegetation removal at the site is necessary to fulfill specific purposes identified in the enabling legislation of the park and would not cause impairment of park resources. Additionally, the No Action Alternative would not result in impacts and would not cause impairment to park resources.

4.2.2.2 Wildlife

Methodology

Impacts to wildlife are a direct result of impacts to vegetation. Loss of habitat due to vegetation removal is the primary impact to wildlife. The results of the vegetation impact analysis were used to assess impacts to wildlife.

No Action

The site would remain in its current state and wildlife habitat that exists as forested or open meadows, wetlands, and streams would remain unchanged. Therefore, there would be no impact to the typical wildlife found in the region, and they would continue to potentially utilize the site as habitat.

Preferred Alternative

The removal of vegetation proposed in the Preferred Alternative for the rehabilitation and restoration of TUA I would disrupt or displace wildlife in the area. Vegetation would be partially removed in the broadleaf deciduous/needleleaf evergreen upland forest, the bluff and slope forest, the early successional habitat, and the managed meadow. Forested buffers would remain along the unnamed tributary, and along the eastern boundary of TUA I and would be available

wildlife habitat. There would be a net loss of forested habitat for wildlife in the project area. The increase in human activity at the site may also affect use of the available habitat by wildlife.

Cumulative Effects

No negative cumulative impacts to wildlife are associated with the No Action Alternative. No negative cumulative impacts to wildlife are associated with the Preferred Alternative. Current and planned development activity in the Tuskegee region is limited. Although the region could experience habitat loss from multiple ongoing roadway and development projects, the Preferred Alternative and other ongoing or future projects in the region each account for a small fraction of available habitat and the cumulative effects would not exceed thresholds of significance.

Conclusions

The No Action Alternative would not impact wildlife. For the Preferred Alternative, forested vegetation removal on the site and increase in human activity at the site would cause permanent, minor impacts to wildlife as a result of habitat loss; however, these changes would be necessary to rehabilitate TUA I to its period of significance and would not cause impairment to park resources. No impairment of park resources would result from either alternative.

4.2.2.3 Wetlands

Methodology

Maps illustrating wetland areas at TUA I were used to identify baseline conditions within the study area. Maps depicting the footprint for the Preferred Alternative were overlaid on the wetland area maps to identify direct impacts to wetlands. Indirect impacts were assessed by reviewing activities outside wetlands and assessing the potential for impacts to the wetland areas.

No Action

The No Action Alternative does not include the rehabilitation or preservation of TUA I. The site would remain in its current use; therefore, there would be no impact to wetlands at the site. The wetland areas on site are currently not disturbed and would be left in their present state because human activity and visitation on site would remain at current levels.

Preferred Alternative

One wetland area, Wetland 4, of the four wetlands mapped on TUA I lies within the footprint of the area proposed for vegetation removal. Wetland 4 is a forested/scrub-shrub wetland located along Chief Anderson Drive. This wetland is located on a slope/hillside and is associated with a high water table and artesian springs; water was observed seeping from the slope during a site visit. Wetland 4 is located southeast of the visitor center.

A stormwater management (SWM) detention pond is proposed adjacent to Wetland 3, at Chappie James Drive and Chief Anderson Drive. This SWM pond would avoid Wetland 3, being constructed outside the boundaries of this wetland. The pond would discharge into Wetland 3, but impacts from water quality to the wetland would be minimal. The detention pond would contain emergent plants and other vegetation designed to treat stormwater before discharge to the wetland. The outlet structure would be designed to discharge above the high water mark of the existing flow of Wetland 3.

Construction activities would not directly impact wetlands, but potential indirect impacts could occur from erosion. Best Management Practices would be required to protect adjacent wetlands from construction impacts during the implementation of the Preferred Alternative. Therefore, there would be no impacts to wetlands.

Cumulative Effects

No cumulative impacts to wetlands are associated with the No Action Alternative. No negative cumulative impacts to wetlands are associated with the Preferred Alternative, when added to the effects of other proposed projects in the vicinity of TUA I. Both alternatives evaluated would have no direct impact on wetlands and therefore there would be no increase of cumulative effects on wetlands in the region.

Conclusions

The No Action or Preferred Alternative would not directly impact wetland areas. Potential indirect impacts to wetlands could occur from erosion during construction activities proposed for the Preferred Alternative. However, Best Management Practices would be required to protect adjacent wetlands from construction impacts during the implementation of the Preferred Alternative. The proposed construction of a stormwater management pond adjacent to Wetland 3 would result in treated stormwater entering the wetlands; however, this impact would be

minimal. Because no negative impacts to wetlands would result from either alternative, there would be no impairment of park resources.

4.2.2.4 Ecologically Critical Areas

Methodology

Primary steps in assessing impacts on critical habitat were taken to determine the following habitat loss or alteration caused by the No Action and Preferred Alternatives. The information in this analysis was obtained through agency coordination with Alabama DCNR and USFWS. The focus of this study is within the boundary of TUAI.

Impact on Critical Habitat – Thresholds

The Endangered Species Act defines the terminology used to assess impacts to critical habitat as follows:

No effect: When a proposed action would not affect designated critical habitat.

May affect / not likely to adversely affect: Effects on designated critical habitat are discountable (i.e., extremely unlikely to occur and not able to be meaningfully measured, detected, or evaluated) or are completely beneficial.

May affect / likely to adversely affect: When an adverse effect to designated critical habitat may occur as a direct or indirect result of proposed actions and the effect either is not discountable or is completely beneficial.

Is likely to adversely modify proposed critical habitat: The appropriate conclusion when the NPS or the USFWS identifies situations in which the proposal could adversely modify critical habitat to a species within or outside park boundaries.

The USFWS has indicated through agency consultation letters that the unnamed tributary at TUAI drains into a segment of the Uphapee Creek extending from Alabama Highway 199 upstream to the confluence of Opintlocco and Chewacla Creeks that has been designated as Critical Habitat for three federally listed mussel species (USFWS 2004b). The three mussel species include the southern clubshell, the ovate clubshell, and the fine-lined pocketbook

(USFWS 2004b). However, the USFWS has stated that that the unnamed tributary at TUI is not large enough to support these three mussel species.

Additionally, the USFWS stated that the project area is within the historic range of the red-cockaded woodpecker, which may be present if suitable habitat occurs within the project area. At TUI, a pine plantation of unknown age and species is located east of the unnamed tributary that bisects the site (Pond & Company 2002a). The pine plantation at TUI would not be altered as part of the Preferred Alternative. Mature loblolly pines and oak species 40 to 50 years old are located within the bluff and slope habitat, portions of which would be rehabilitated and restored as part of the Preferred Alternative (Pond & Company 2002a). This habitat is not considered preferred habitat for the red-cockaded woodpecker due to the young age of the trees. A mixed upland forest of unknown age dominated by loblolly pine, water oak, and sweetgum is also present and located throughout TUI, portions of which would be altered as part of the Preferred Alternative (Pond & Company 2002a). This area does not appear to be preferred habitat for the red-cockaded woodpecker due to the presence of deciduous plant species documented in the habitat.

No Action

The site would remain in its current state and the HCA would remain closed to the public. As noted above, there is no critical habitat within TUI. The No Action Alternative would not affect the designated critical habitat in the vicinity of TUI, thus there would be no impact to critical habitat as a result of this alternative.

Preferred Alternative

The Preferred Alternative would not impact red-cockaded woodpecker habitat. Consultation with the USFWS confirmed that no further action is required by the NPS for red-cockaded woodpecker habitat at TUI as part of this project.

Potential adverse effects to proposed Critical Habitat in Uphapee Creek may occur if construction activities were to impact the unnamed tributary. These activities would have to be coordinated with the USFWS prior to any construction. There are no construction activities proposed that would impact the unnamed tributary. Erosion and sediment BMPs would be employed to prevent impact to the stream from construction activities.

Cumulative Effects

Impacts of both the No Action and Preferred Alternatives evaluated would have no impact on ecologically critical areas and therefore there would be no cumulative effects on these areas in the region.

Conclusions

No impacts would occur to ecologically critical areas as a result of either alternative evaluated. Therefore, there would be no impairment of park resources.

4.2.2.5 Rare, Threatened, and Endangered Species

Methodology

Primary steps in assessing impacts on listed species were taken to determine the following:

1. which species are found in areas likely to be affected by management actions described in the alternatives;
2. habitat loss or alteration caused by the alternatives; and,
3. displacement and disturbance potential of the actions and the species' potential to be affected by the activities

The information in this analysis was obtained through agency coordination with Alabama DCNR and USFWS. The focus of this study is within the boundary of TUAI.

Impact on Listed Species – Thresholds

The Endangered Species Act defines the terminology used to assess impacts to listed species as follows:

No effect: When a proposed action would not affect a listed species or designated critical habitat.

May affect / not likely to adversely affect: Effects on special status species are discountable (i.e., extremely unlikely to occur and not able to be meaningfully measured, detected, or evaluated) or are completely beneficial.

May affect / likely to adversely affect: When an adverse effect to a listed species may occur as a direct or indirect result of proposed actions and the effect either is not discountable or is completely beneficial.

Is likely to jeopardize proposed species / adversely modify proposed critical habitat (impairment): The appropriate conclusion when the NPS or the USFWS identifies situations in which the proposal could jeopardize the continued existence of a proposed species or adversely modify critical habitat to a species within or outside park boundaries.

The Alabama DCNR has documented two listed species approximately 1.1 miles from the site; these species are the crystal darter and the fine-lined pocketbook mussel (Alabama DCNR 2004b). Further consultation with Alabama DCNR demonstrated that these species have been recorded in the Uphapee Creek, located adjacent to the TUA I.

The USFWS has stated that three mussel species, the southern clubshell, ovate clubshell mussel, and fine-lined pocketbook, still occur downstream of the confluence of the tributary with the Uphapee Creek, but that the unnamed tributary is not large enough to support these species. The USFWS has stated that a mussel survey is unnecessary because the mussel species are known to occur in Uphapee Creek.

Additionally, the USFWS stated that the project area is within the historic range of the red-cockaded woodpecker, which may be present if suitable habitat occurs within the project area. The red-cockaded woodpecker prefers open stands of southern pines, a minimum age of 60 to 80 years, most commonly longleaf pines (USFWS 2004b). At TUA I, a pine plantation of unknown age and species is located east of the unnamed tributary that bisects the site (Pond & Company 2002a). This area was once farmland and is now used for timber harvesting.

No Action

Areas that may be potential habitat for RTE species such as streams, wetlands and forested sections of the site, would remain undisturbed with the No Action Alternative as there would be no construction or other ground-disturbing activities. The site would remain in its current use and there would be no effect to RTE species that may potentially utilize the site.

Preferred Alternative

The Preferred Alternative would not impact red-cockaded woodpecker habitat. Consultation with the USFWS confirmed that no further action is required by the NPS for red-cockaded woodpecker habitat at TUAJ as part of this project.

Potential adverse effects to the three listed mussel species may occur if construction activities were to impact the unnamed tributary. These activities would have to be coordinated with the USFWS prior to any construction. There are no construction activities proposed under the considered alternative that would impact the unnamed tributary. Erosion and sediment BMPs would be employed to avoid impact to the stream from construction activities.

Cumulative Impacts

No negative cumulative impacts to RTE species are associated with the No Action Alternative. No negative cumulative impacts are associated with the Preferred Alternative to RTE species, when added to the effects of other proposed projects in the vicinity of TUAJ.

Conclusions

No notable effects on RTE species from either the No Action or the Preferred Alternative are expected at TUAJ. The USFWS has stated that three mussel species and the red-cockaded woodpecker are of concern for this site. The project area is within the historic range of the red-cockaded woodpecker, but the habitat it prefers would not be altered as part of the Preferred Alternative. Through coordination with the USFWS, no further action is required by the NPS for red-cockaded woodpecker habitat at TUAJ as part of this project. There would be no impairment of park resources from either alternative.

4.2.3 Socioeconomic Resources

4.2.3.1 Demographics, Economy, and Land Use

Methodology

Changes to demographics, land use, and other socioeconomic conditions, or minority and low-income communities were evaluated on a local or regional level. The study area includes the

region surrounding TUAJ in order to address socioeconomic impacts to the communities potentially affected by the No Action or the Preferred Alternative.

No Action

The No Action Alternative would not stimulate the creation of new jobs, new development, or local infrastructure improvements, and therefore would not provide any socioeconomic benefits to the region. Unlike the Preferred Alternative, there would be no substantial increases in visitors to the site; therefore, no additional tourist dollars would be added to the local economy.

Preferred Alternative

The Preferred Alternative would improve quality of life in the Tuskegee region by providing additional opportunities for employment; providing additional opportunities for passive outdoor recreational experiences; and providing incentives for partnering with local governments, community groups, and individual citizens; all of which would create a potential economic benefit to the community.

Land Use

The proposed improvements to TUAJ would not directly change the land use of the site or the surrounding area. According to Tuskegee's 2010 Comprehensive Plan, future land uses planned for the parcels surrounding TUAJ include commercial and industrial land uses; however, most of the area surrounding TUAJ would remain as forested, agricultural or open space (SCADC 2000). The proposed 90-acre site that would make up the entire NPS park unit would include parcels acquired from Tuskegee University and would be maintained as an NPS National Historic Site to offer recreational and cultural resources to the local and regional community.

Education

Educational opportunities in Macon County would improve due to the Preferred Alternative. Resources kept at TUAJ and learning opportunities onsite would benefit regional students and other residents, and researchers would have access to a central source of information on the Tuskegee Airmen. Several schools and universities, including Tuskegee University and Southern Community College, are located in Tuskegee and would benefit from an enhanced collection of resources at TUAJ and the rehabilitation of existing resources.

NPS Community and Regional Economic Contribution

As an individual entity, it is estimated that TUAJ would contribute to the local economy by attracting approximately 495,000 visitors per year within the first five years after completing the new facilities, assuming a 50 percent market penetration. It would also become an integral component of the overall tourism experience for Macon County and the state of Alabama. Total revenue to be introduced into Alabama's economy, both indirectly and directly, as a result of the Preferred Alternative at TUAJ is estimated to be approximately \$65.5 million (ABTT 2000).

In addition, the park would contribute directly to the local economy by hiring permanent and part-time employees and purchasing goods and services from local suppliers. The local economy would benefit from a short-term increase in employment during construction. It is estimated that over the five-year period following completion of the Preferred Alternative, approximately 1,450 new jobs would be created from TUAJ improvements within the travel industry, as well as other sectors that support the travel industry in Alabama. State-level earnings would increase by approximately \$22 million, which includes wages and salaries paid to new workers hired within the travel industry, as well as all other sectors that support the travel industry (ABTT 2000). The city of Tuskegee, Macon County, and other regional entities, such as Moton Field Municipal Airport and Tuskegee University, would all receive long-term economic benefits from the new tourist destination and educational resource.

Increases in employment and visitors to the region may result in housing and infrastructure improvements. In addition to more commercial and residential development in the region, air traffic at the Moton Field Municipal Airport may increase slightly due to an increase in residents and visitors to the area.

Cumulative Impacts

Cumulative impacts to the regional infrastructure and land use may occur due to an increase in tourists visiting the region. Improvements to increase capacity to roads, utilities, and housing in the region may be needed to support the increase in tourists and residents. NPS will coordinate with the Alabama DOT and the city of Tuskegee regarding potential access issues and traffic levels. Currently, visitors to the proposed facilities would travel from I-85, exit south on Route 81, and then travel east on Route 199 (Chappie James Drive) to reach the TUAJ entrance. The Alabama DOT has expressed interest in constructing a new access road from I-85 directly to TUAJ. This may be necessary if mobility is significantly reduced along Route 81 and Route 199 due to additional traffic from tourists (NPS Southeast Regional Office 1998). According to the

Alabama DOT 2004-06 Statewide Transportation Improvement Program and the Five Year Plan (2004-2008), funds have not been allocated for improvements to I-85 or any of the surrounding roads near TUAJ in Macon County (Alabama DOT 2004).

Indirect changes to land use patterns in the surrounding area may occur. Increases in private development, such as lodgings, restaurants, and service stations, may occur to meet the needs of visitors to the region. Commercial development would bring additional consumer services that are currently not available to local residents. There are no zoning restrictions in this region of Macon County. If the local government does not regulate development in the surrounding area through zoning laws, the historic integrity and viewshed of TUAJ and the small-town, rural character of the area may diminish over time as unplanned development occurs.

Conclusions

In summary, the Preferred Alternative would have major beneficial impacts on the region's socioeconomic resources. TUAJ would provide an economic stimulus in Macon County that is much needed for regional growth. The No Action Alternative would not result in impacts to demographics, economy or land use.

4.2.3.2 Environmental Justice

Methodology

Changes to minority and low-income communities were evaluated on a regional level. The study area includes the region surrounding TUAJ in order to address any disproportionate impacts to the surrounding communities that may potentially occur from the No Action or the Preferred Alternative.

No Action

The No Action Alternative would not result in any impacts to the surrounding low-income or minority communities. However, the additional benefits that would be gained from rehabilitating and interpreting a cultural resource that is valuable and unique to African-Americans in the region would not be realized. There would be no increase in educational, recreational or economic opportunities for minority or low-income groups in the region that have the potential to occur with the Preferred Alternative.

Preferred Alternative

Since Macon County and the city of Tuskegee have high percentages of minority and low-income residents, environmental justice was considered for the Preferred Alternative. Negative impacts to minority and low-income communities are not likely to occur; however, beneficial impacts may result, directly and indirectly, from the improvements to TUAJ. These direct and indirect benefits may include increases in regional affordable housing, employment, recreational and educational opportunities. The main purpose of this project is to rehabilitate and protect cultural resources that represent an important time period in African-American history. Fulfillment of this purpose would greatly benefit minority communities in Tuskegee and Macon County, as well as groups throughout the United States who have connections to the Tuskegee Airmen.

Cumulative Impacts

Cumulative impacts on minority and low-income communities are not expected when the effects of the Preferred Alternative are added to the effects of other proposed projects in the region. The Preferred Alternative would only add beneficial impacts to the region.

Conclusions

In summary, the Preferred Alternative would result in beneficial impacts to the region's low-income and minority communities. TUAJ would provide a stimulus for recreational, educational, and economic resources that are much needed in Macon County to improve quality of life for minority and low-income communities. The No Action Alternative would not result in impacts to surrounding low-income or minority communities.

1.0.0.0 Recreation

The study area includes the region surrounding TUAJ.

Methodology

Alternatives were evaluated to assess impacts to recreational facilities within TUAJ and nearby areas.

No Action

Under the No Action Alternative, recreational opportunities, such as picnicking and walking along trails, would not be realized at TUAI. Current levels of visitor services would remain unchanged, offering limited educational and recreational opportunities.

Preferred Alternative

Proposed recreational improvements include adding picnic areas outside of the HCA and trails to and from the HCA. A scenic overlook would be provided for contemplation as well as an overview of the HCA. The Overlook Area would be located close to the Tuskegee Airmen Memorial and the visitor contact station. Open space would be provided for recreational activities.

The proposed site improvements would significantly increase recreational opportunities in Macon County, especially with its park-like atmosphere, picnic areas, and trails. Enhancing recreational opportunities on-site at TUAI may spur development for additional recreational facilities off-site, such as local parks with bike or pedestrian trails, museums, or theaters.

Cumulative Impacts

Cumulative impacts on recreational resources are not expected when the effects of the Preferred Alternative are added to the effects of other proposed projects in the region. The Preferred Alternative would only add beneficial recreational impacts to the region.

Conclusions

In summary, there would be no negative impacts to recreational resources at TUAI. The Preferred Alternative would be a major beneficial impact to TUAI's recreational resources, as there are limited recreational opportunities currently available at the site. The No Action Alternative would not result in impacts to TUAI's recreational resources. No impairment of park resources would result from either alternative.

4.2.3.4 Aesthetics

Methodology

Alternatives were evaluated to assess impacts to the features that define the existing aesthetic and scenic resources within and surrounding the park landscape. The study area includes the land surrounding TUAJ.

No Action

The No Action Alternative would not result in changes to the aesthetic appearance of TUAJ. Maintenance of the facilities and landscaping would remain at current levels. If no rehabilitation or stabilization is performed at TUAJ, the historic structures would continue to deteriorate and eventually be irretrievable. The surrounding land use would also remain relatively unchanged compared to the Preferred Alternative.

Preferred Alternative

Aesthetics within the HCA as well as the rest of the TUAJ would be considerably altered from current conditions; however, most changes would recreate the historic condition of the site.

Landscaping onsite would be based on the historic landscape plan developed by D.A. Williston, and much of the overgrown vegetation in the HCA would be removed and replaced with native grasses to return the site to its open landscape. Foundation shrubbery would be placed around the historic structures as depicted in Williston's plan. To provide a clear view for visitors to see the HCA from the Scenic Overlook 30 feet above, vegetation blocking the view would be removed. The Williston plan included planting privet on the hillside near Hangar Number One, but since this is an exotic species, a native species would be substituted to reduce soil erosion on slopes. Several other exotic species were listed on Williston's plant list; however, native plants would be used throughout the site and exotic species would be removed to prevent further invasive growth. Natural buffer plantings would be placed near wetlands and streams, and any wetlands currently located onsite would be preserved. In addition, the original pond used for fire safety that was located at the eastern end of the HCA would be rehabilitated. Picnic areas and walking trails would also be added outside of the HCA; however, any structures proposed outside the HCA would be situated in a manner that would not alter the historic viewshed from the HCA. Buffer plantings also would be placed between the HCA and the Moton Field Municipal Airport, so as to obscure the view of the modernized airport.

All historic structures would be recreated or rehabilitated to resemble the original appearance as closely as possible and would comply with the legislation establishing the TUIAI. Several other structures would be added to the HCA for general operations, such as new mechanical and electrical systems that would vary depending on the needs of each building; however, any non-historic structures would be screened from public view. In addition, audio impacts to the HCA from non-historic structures, such as HVAC systems, would be minimized to the greatest extent possible. Other structures to be added to the HCA include exterior security lighting, and historic objects such as signage, benches, vehicles and aircraft (Hartrampf 2004b).

Cumulative Impacts

The effects of both the No Action and Preferred alternatives are not expected to be major when added to the effects of other proposed projects in the region on the aesthetic character of TUIAI and the surrounding area. Changes to TUIAI as a result of the Preferred Alternative would result in an aesthetic improvement to park resources. The NPS would coordinate with the city of Tuskegee and Macon County to limit impositions to the viewshed from future development through zoning and building restrictions.

Conclusions

In summary, the Preferred Alternative would have moderate impacts on the scenic quality of TUIAI by rehabilitating the site to a more native, historic landscape and rehabilitating the structures remaining. The No Action Alternative would not impact aesthetics at TUIAI as there would be no alterations to the landscape or viewshed. No impairment of park resources would result from either alternative.

4.2.3.5 Noise

Methodology

Several evaluation parameters are relevant to identify and describe the potential impacts on soundscapes in the project area:

1. Audibility (i.e., whether the sound can be heard at all within the natural soundscape).

2. Sound level (i.e., amount of sound energy or loudness of the sound).
3. Time factors (i.e., duration, frequency of occurrence, and timing).
4. Sensitive Receptors (i.e. schools, hospitals, nursing homes, childcare facilities, etc).

The effects of the project on soundscapes include an analysis of the context of soundscapes in the project area. The intensity of the impact on soundscapes is generally characterized by quantifying the sound level and its audibility through the use of typical data. The duration of the impact is described where necessary to understand the context and intensity of the data. An analysis of adjacent and nearby land use indicates there are no sensitive receptors in the area of influence.

No Action

The site would remain in its current use where minimal visitation occurs. The current activities at TUAJ generate minimal noise, as there is little human activity or vehicular traffic at the site. No action would be taken at the Federal level; therefore, there would be no impact to noise.

Preferred Alternative

The construction phase of the proposed action is expected to create minor and temporary impacts at the site. These impacts would be short-term in nature, lasting for the duration of construction activities. Noise is expected, but noise impacts are generally localized at the vicinity of the construction site. Earthmoving equipment, asphalt pavers, and other construction equipment and vehicles would create localized increases in noise levels. These temporary noise impacts would not disrupt the surrounding area.

Noise sources that would be associated with the site's operations are additional visitor vehicle traffic traveling to and from the site.

Cumulative Impacts

No cumulative impacts on the soundscape are associated with the No Action Alternative. The Preferred Alternative would not result in a significant increase in noise when added to current traffic and aircraft sources.

Conclusions

No major effects on the soundscape from either the Preferred Alternative or the No Action Alternative are expected at TUIAI. Implementation of the Preferred Alternative would produce minor and short-term noise impacts during the construction phase. In the long-term, a minor increase in noise from additional visitor vehicular traffic would occur in the vicinity of TUIAI. However, no sensitive receptors are located in the vicinity of TUIAI. No impairment of park resources would result from either alternative.

4.2.3.6 Energy Requirements and Conservation

Methodology

Energy requirements are associated with heating and cooling of rehabilitated and reconstructed buildings and vehicles operating on the site. NPS management policies require that all facilities be managed, operated, and maintained to minimize energy consumption. The policies also require that new energy-efficient technologies be used where appropriate and cost-effective.

No Action

The site would remain in its current use, and no action would be taken at the federal level; therefore, there would be no changes to the energy requirements and conservation at the site. Since the HCA is currently closed to visitors pending rehabilitation and the site has not been fully developed as an NPS park, only minimal energy requirements are needed for the temporary visitor center and its associated facilities.

Preferred Alternative

Energy consumption and natural resource requirements would minimally increase during all phases of construction and operation for the Preferred Alternative. During the construction phase, energy requirements would be temporary. However, minor increases in energy consumption would occur to operate the proposed visitor services and interpretive displays within the HCA and any NPS staff facilities. Actions to promote sustainable development in the design, retrofit, and construction of facilities have associated energy conservation and air quality benefits. Energy conservation and sustainable resources and methods are identified in the *Value Analysis Study* and would be applied whenever possible in the design and implementation of the

Preferred Alternative. For example, all building designs would be evaluated against the Leadership in Environmental and Engineering Design System (LEEDS) criteria to maximize the LEEDS score. The preliminary estimates for the LEEDS score rates the design as Certified (Hartrampf 2004a).

The proposed design would also minimize the need for exterior lighting in the Visitor Services Area, since the park would not be open for long periods at night. It was also recommended that lighting within the HCA be limited to reproduction historic lighting with no additional security-type lighting.

For the Preferred Alternative, there is a possibility that transportation would be provided for visitors between the future visitor contact station and the HCA. All vehicle purchases made by NPS for transportation within the park would be in accordance with Executive Order 13031's requirements (NPS Office of Policy 2004). No major increases in energy and natural resource requirements would occur for the Preferred Alternative.

Cumulative Impacts

Future development of the park may include the construction of a Tuskegee Airmen National Center (TANC) that also would require energy resources. The TANC would include a full-scale military museum and would accommodate the Tuskegee University's Department of Aviation Science; therefore additional energy requirements would be necessary in the future. Vehicle access and parking needs for the TANC would be incorporated into the proposed parking for the Preferred Alternative (Hartrampf 2004a). The location of this facility and its amenities were considered during the planning and design of the Preferred Alternative; however, it is not part of this project.

Conclusions

No major increases in energy and natural resource requirements would occur for the Preferred Alternative. Park resources and values would not be degraded to provide energy for improvements at TUAI. The energy requirements for the proposed new facilities would be kept to a minimum by utilizing energy-efficient systems and sustainable design to comply with applicable Executive Orders, including *Executive Order 13123: Greening the Government Through Effective Energy Management*, *Executive Order 13031: Federal Alternative Fueled Vehicle Leadership*, and *Executive Order 13149: Greening the Government Through Federal Fleet and Transportation Efficiency* (NPS 2001b). There would be no increases in energy or

natural resource requirements for the No Action Alternative, considering that the HCA would remain closed to visitors and visitation would remain close to current levels.

4.2.4 Cultural, Historic, and Archeological Resources

The resources of the TUA I site have been documented in the previously published *Special Resource Study*, the Phase I Archeology Report, the Moton Field *Cultural Landscape Report*, and the 15 individual historic structure reports prepared for the NPS. These reports were developed to evaluate compliance with Section 106 of the National Historic Preservation Act.

As a result, it was determined, and the Alabama State Historic Preservation Office has concurred, that there are no National Register of Historic Places (NRHP) eligible archeological resources located within the project's Area of Potential Effect (APE) (see September 27, 2004 letter in Appendix C). Additionally, the study area is not considered an ethnographic resource because there is no archeological evidence that it was ever substantially inhabited by any prehistoric cultures.

The National Register listed TUA I does contain historic resources as well as a historic cultural landscape. There are nine extant structures that consist of the Bath and Locker House, the Control Tower, the Dope Storage Shed, the Entrance Gate, the Fire Protection Shed, Hangar Number One, the Oil Storage Shed, the Skyway Club and the Warehouse/Vehicle Storage Shed. An additional six non-extant structures were also documented in the *Historic Structures Report*. These six are the Army Supply Building, the Flight Commander's Office (Cadet Class and Waiting Room), the Guard Booth, Hangar Number Two, the Physical Plant Warehouse, and the Vehicle Maintenance Shed. The cultural landscape consists of landscaping, pedestrian walkways, curb and valley gutters, tennis courts, site furnishings, underground storage tanks, and an artesian well system. All of these features, combined with the structures, are contained within the eligible National Register boundary for the TUA I.

The TUA I also has a museum collection of related artifacts and photography, which is kept offsite in archival storage as per the requirements of 36 CFR Part 79. This collection would be utilized upon project completion.

Methodology

In this EA impacts to cultural resources (historic structures and the cultural landscape) are described in terms of type, context, duration, and intensity, which is consistent with the CEQ

regulations. These impact analyses are intended, however, to comply with the requirements of both the National Environmental Policy Act and section 106 of the National Historic Preservation Act (NHPA).

In accordance with the Advisory Council on Historic Preservation's regulations implementing section 106 (36 CFR Part 800, "Protection of Historic Properties"), impacts to cultural resources were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed on or eligible to be listed on the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed on the national register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the advisory council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected, national register eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualify it for inclusion on the national register (e.g. diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the Preferred Alternative that would occur later in time, be farther removed in distance or be cumulative over the course of time (36 CFR Part 800.5, "Assessment of Adverse Effects"). A determination of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion on the national register.

A section 106 summary is included in the impact analysis sections for historic structures and buildings as well as cultural landscapes under the Preferred Alternative. This summary is intended to meet the requirements of section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based upon the criterion of effect and criteria of adverse effect found in the regulations of the Advisory Council on Historic Preservation.

Historic Structures/Buildings

Definitions of Intensity Levels

In order for a structure or building to be listed in the National Register of Historic Places, it must meet one or more of the following criteria of significance: (A) associated with events that have made a significant contribution to the broad patterns of our history; (B) associated with the lives

of persons significant in our past; (C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or (D) have yielded, or may be likely to yield, information important in prehistory or history. In addition, the structure or building must possess integrity of location, design, setting, materials, workmanship, feeling, and association (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact(s) is at the lowest levels of detection – barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Minor: **Adverse impact** – impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Beneficial impact – stabilization/ preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Moderate: **Adverse impact** – impact would alter a character defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Beneficial impact – rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Major: **Adverse impact** – impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the

extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*.

Beneficial impact – restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

The Area of Potential Effect (APE) for the TUAJ was determined to be the original 44 acres that contained the Historic Core Area (HCA) of the site as well as all affiliated and contributing features. The period of significance is 1945 because all contributing structures were in existence by this time. As the resource has previously been thoroughly documented, the eligible cultural resources were not resurveyed for the purpose of this document.

The application of the criteria of adverse effects to the HCA of the TUAJ can be further broken down into the 15 individual structures, 9 extant and 6 non-extant. An assessment of the effects to the cultural landscape of TUAJ follows the individual structures assessment. As per the Code of Federal Regulations, an “adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association” (36 CFR 800.5).

An assessment of the reasonably foreseeable effects that would occur at a time later than project implementation is included in cumulative impacts. Any potential mitigative measures are discussed in the conclusions.

No Action

The No Action Alternative as it applies to cultural resources consists of leaving the standing structures in their present condition, including the non-historic structures associated with the Veterinary School of Tuskegee University. No historic structures would be restored, rehabilitated or reconstructed and the existing cultural landscape would remain untouched.

Army Supply Building

The Army Supply Building is no longer an extant structure. It was constructed in 1942 and demolished in 1982. The archeological investigation identified the location of the northeast corner pier but there is no above ground evidence of the structure. Therefore, under the No Action Alternative there would be no adverse effect for the Army Supply Building since there cannot be an impact to a non-existent structure.

Bath & Locker House

The Bath & Locker House was constructed during the fall and winter of 1942-1943. It is a wood frame building that has remained unchanged in its configuration since construction. When the NPS took over management of the TUA I in 1998, large sections of the roofing system were missing, and the building was open to the elements. Stabilization of the structure consisted of the construction of a new roof, the replacement of one badly damaged wall, and the removal of all windows for off-site preservation. Window openings and glass door openings were also covered with commercial-grade plywood at this time.

Under the No Action Alternative, there would be no adverse effect to the Bath & Locker House. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would again fall into disrepair. The plywood covering the window and door openings is not meant to withstand prolonged outdoor exposure and is already in the early stages of deterioration. The rate of decay would increase with time and the interior would once again be exposed to the elements. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Control Tower

The Control Tower was constructed in 1942-1943 and was originally part of Hangar Number Two. It is a three-story brick masonry structure with exterior walls capped with concrete coping. A frame observation tower with a pyramidal roof originally topped the Control Tower. The observation tower and the interior floors are no longer in existence and the windows have all been removed. In 2001, stabilization work on the Control Tower included the addition of tie rods around the masonry perimeter to keep the bricks from spreading or the walls from bowing.

The window openings were covered in commercial-grade plywood. Partial repointing of the mortar and the construction of a frame pyramidal roof was also undertaken at this time.

Under the No Action Alternative, a determination of adverse effect is recommended for the Control Tower. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. The plywood covering the window openings is not meant to withstand prolonged outdoor exposure and is already in the early stages of deterioration. Additionally, areas of the Control Tower are open to the elements, which is further reducing the interior architectural integrity through the exposure to rain and wildlife. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Dope Storage Shed

The Dope Storage Shed was constructed in 1942-1943 for the purpose of storing the supply of dope, a substance used to strengthen the exterior fabric of aircraft. It is a one-room structure built of brick and capped with a frame section with a slanting shed roof. The stabilization of the building consisted of the replacement of the roof and frame section with in kind materials. The door may or may not be original and remained in place after stabilization efforts were completed.

Under the No Action Alternative, there would be no adverse effect for the Dope Storage Shed. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Entrance Gate

The Entrance Gate, constructed circa 1943, is built of textured brick on a concrete foundation with cast stone capping. The original plans called for a cast iron gate to close the drive between the two flanking wings of the Entrance Gate but it was never implemented. There is also a niche that once housed a bust of Robert Moton for whom the airfield was named. The historic light fixtures have been removed. According to the *Historic Structures Report* for the Entrance Gate,

the resource is structurally sound and significantly unchanged. Therefore, no stabilization was required by the NPS.

Under the No Action Alternative, there would be no adverse effect to the Entrance Gate. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would begin to deteriorate. Therefore, the deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Fire Protection Shed

The Fire Protection Shed was constructed c. 1941 and is a small brick building with a shed roof. The original roof was badly deteriorated and was replaced as part of the stabilization plan by the NPS.

Under the No Action Alternative, there would be no adverse effect to the Fire Protection Shed. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Flight Commander's Office (Cadet Class and Waiting Room)

The Flight Commander's Office is no longer an extant structure. It was constructed in 1942 and demolished in 1985. There is no above ground evidence of the structure. Therefore, under the No Action Alternative, there would be no adverse effect to the Flight Commander's Office because there cannot be an impact to a non-existent structure.

Guard Booth

The Guard Booth was a small frame structure with windows and a pyramidal or hipped roof. Its location at the historic site changed over time but its primary function was to control the flow of automobile and pedestrian traffic at the airfield. The date of demolition is unknown and there is no above ground evidence of the structure. Therefore, under the No Action Alternative, there would be no adverse effect to the Guard Booth because there cannot be an impact to a non-existent structure.

Hangar Number One

Hangar Number One was constructed during the summer of 1941 by Tuskegee Institute as part of the new airfield and flying school. There were additions to the structure in 1942 and again in 1943-1944. It is a brick and clay tile structure whose main area measures 75 feet by 98 feet. The open hangar area is surrounded on three sides by auxiliary office/utility space. The 2001 stabilization of Hangar Number One included extensive work on the exterior brick masonry walls and the reconstruction of the corrugated metal roofing and wood rafters of the central hangar area with in-kind materials. Additionally, the remaining windows and doors were covered with commercial-grade plywood.

Under the No Action Alternative, there would be an adverse effect to the Hangar Number One. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. The auxiliary office/utility space did not receive a new roof during stabilization and is still open to the elements. The plywood covering the window and door openings is not meant to withstand prolonged outdoor exposure and is already in the early stages of deterioration. No stabilization work has been performed on the wooden balcony at the rear of the hangar and it was only in fair condition when examined for the *Historic Structures Report*. Not all openings to the hangar have been sealed and, as with the Control Tower, it has become accessible to the local wildlife. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Hangar Number Two

Hangar Number Two was constructed in 1942-1943 to accommodate the growth of the flying school at Moton Field. It was similar in construction to Hangar Number One in that it had masonry exterior walls and a segmentally arched roof. The Control Tower was originally part of Hangar Number Two. The Veterinary School of the Tuskegee Institute took over the building and used it for research purposes until 1989 when a fire destroyed most of the structure. The concrete slab foundation is still in place, which clearly delineates the floor plan of the resource. However, under the No Action Alternative, there would be no adverse effect to Hangar Number Two because there cannot be an impact to a non-existent structure.

Oil Storage Shed

The Oil Storage Shed was constructed in 1942 and is a small, square brick building used to store aircraft oil. The original roof was badly deteriorated and was replaced as part of the stabilization plan by the NPS.

Under the No Action Alternative, there would be an adverse effect to the Oil Storage Shed. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Physical Plant Warehouse

The Physical Plant Warehouse was constructed in 1944 and was of frame construction with a shed roof. It was built for the purpose of providing office and storage space for the administrators of the flying school. It was demolished in 1989 and there is no longer any above-ground evidence of the structure. Therefore, under the No Action Alternative, there would be no adverse effect to the Physical Plant Warehouse because there cannot be an impact to a non-existent structure.

Skyway Club

The Skyway Club was constructed in 1945 as a “social and recreational gathering place largely for those who worked and instructed at the primary flying school airfield” (Jaeger 17:02). It is a one story L-shaped resource of frame construction, with a gable roof and concrete block foundation. The interior rooms have undergone numerous changes and subdividing, but the exterior has retained its architectural integrity. Stabilization work on the Skyway Club consisted of the construction of a new roof on the rear of the structure, the replacement of the exterior siding, and the reconstruction of the three porches. Most of the original windows and doors were removed for safe-keeping to off-site storage and their openings were covered with commercial-grade plywood.

Under the No Action Alternative, there would be no adverse effect to the Skyway Club. The stabilization efforts that were undertaken by the NPS were intended as temporary measures against the further decay of the structure. If no additional work is performed on the resource, as

would be the case under the No Action Alternative, the structure would continue to deteriorate. The plywood covering the window openings is not meant to withstand prolonged outdoor exposure and is already in the early stages of deterioration. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Vehicle Maintenance Shed

The Vehicle Maintenance Shed was constructed in 1943-44 for the purpose of storing the associated trucks and ambulances of the airfield. It was a rectangular structure with open walls and a gable roof. The date of demolition is unknown. Therefore, under the No Action Alternative, there would be no adverse effect to the Vehicle Maintenance Shed because there cannot be an impact to a non-existent structure.

Warehouse/Vehicle Storage Building

The Warehouse/Vehicle Storage Building was constructed in 1943 for the purpose of non-airfield related shipment storage as well as a garage area for a few vehicles. It is a rectangular-shaped concrete block structure with a gable roof. The building was utilized by the Tuskegee Institute School of Veterinary Medicine which undertook substantial alterations to the interior in 1974. The concrete block gable-end walls were removed and replaced with frame construction with a plywood exterior. The building is in good condition although it has retained very little of its architectural integrity.

Under the No Action Alternative, there would be an adverse effect to the Warehouse/Vehicle Storage Building. The plywood covering the gable-end exterior walls is not meant to withstand prolonged outdoor exposure and is already in the advanced stages of deterioration. If no additional work is performed on the resource, as would be the case under the No Action Alternative, the structure would continue to deteriorate. Therefore, the further deterioration of the structure under the No Action Alternative would be considered to have an adverse effect on the resource.

Moton Field Cultural Landscape

In addition to the nine extant and six non-extant structures, the cultural landscape of TUI is comprised of contributing features such as the walkways, curbing, taxiways, roadways, and runways. There is an artesian water system as well as underground fuel storage tanks and

drainage structures. There are a few historic light fixtures and site furnishings left on the grounds of TUAJ. Additionally, the landscape itself still represents, in some areas, what was originally designed for the site.

Under the No Action Alternative, there would be an adverse effect to TUAJ's Cultural Landscape. If no additional work is performed on the site, as would be the case under the No Action Alternative, the contributing features would continue to deteriorate and disappear. Therefore, the further deterioration of the resource under the No Action Alternative would be considered to have an adverse effect on the resource.

Preferred Alternative

The Preferred Alternative as it applies to cultural resources consists of the restoration, rehabilitation, or reconstruction of the structures and the landscape of the HCA to its appearance during the period of significance, 1945. All actions would be in compliance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* and *Guidelines for the Treatment of Cultural Landscapes*. The structures would be utilized by the NPS for interpretive programs, media displays, visitor-related utilities, and necessary office space. In order to achieve the feel of "stepping back in time," period correct signage, vehicles, and aircraft would be placed throughout the grounds. Additionally, the non-contributing structures that date from the time of occupation by Tuskegee University's School of Veterinary Medicine would be removed.

Army Supply Building

The Army Supply Building is no longer an extant structure. It was demolished in 1982, and there is no longer any above ground evidence of the resource. Under the Preferred Alternative, a ghost structure of the original building would be constructed within the footprint of the historic location of the resource. The ghost structure would consist of a three-dimensional skeletal frame showing the location and dimensions of the original building. While the original plan for the building is not available, there is an architectural drawing from May of 1943 that shows the dimensions and floor plan of the structure as well as the plans for a small addition. This plan, in addition to historic photographs, allows for a reasonable reconstruction of the original height, width, and length of the Army Supply Building.

There would be No Adverse Effect to the Army Supply Building under the Preferred Alternative. Because the Army Supply Building is no longer an extant structure, the construction of the

proposed ghost structure in its historic location would not affect the resource. Also, no NRHP eligible archeological sites were identified in this area during the Phase I survey so the ground disturbance associated with the construction of the ghost structure would not adversely affect the resource. The ghost structure, and its related visitor signage, would have a beneficial effect to the resource because it would be a visual representation of the non-extant building and show its spatial relationship within the HCA. Therefore, because there is no integrity to affect, the proposed changes would have No Adverse Effect to the resource.

Bath and Locker House

Restoration and rehabilitation of the Bath and Locker House is proposed under the Preferred Alternative. Architectural drawings of the resource have not been located but there are numerous historic photographs and original site plans to aid in the rehabilitation. The structure underwent stabilization in 1998 with the construction of a new roof composed of in-kind materials to the original. The Preferred Alternative would restore the exterior of the resource to its 1945 appearance to the greatest extent possible using the Secretary of the Interior's Standards and Guidelines. Most of the original windows were removed to an off-site storage location during stabilization and would be returned to their original locations upon restoration.

The interior of the resource would be rehabilitated to be administrative offices and a staff break room utilized by NPS staff and would not be open to the public. The mechanical systems in the building would be updated and would comply with the Secretary of the Interior's Standards and Guidelines.

There would be No Adverse Effect to the Bath and Locker House because the proposed project would strictly adhere to the Secretary of the Interior's Standards and Guidelines and the resource would be returned to its original exterior appearance and use to the greatest extent possible. Therefore, the proposed project would have a beneficial effect upon the Bath and Locker House.

Control Tower

Restoration and rehabilitation of the Control Tower is proposed under the Preferred Alternative. The original 1942 architectural drawings for the Control Tower are in existence and detail the floor plan for each of the four levels of the structure. The resource underwent stabilization in 2001 that consisted of temporarily securing the masonry exterior to prevent the structure from spreading. Upon project implementation, the exterior of the resource would be restored to its

1945 appearance to the greatest extent possible by a complete repointing of the mortar, repairing the concrete caps, and restoration of the doors and windows.

The interior of the resource would be rehabilitated, but the building would not house interactive displays. The original stairs and flooring were destroyed when the adjacent Hangar Number Two burned in 1989. Through the use of the architectural drawings and photography, the historic stairs would be reconstructed, and the interior details restored. The historic stairs would provide limited access to the observation deck. A small elevator would need to be installed to provide access to the upper levels as per ADA compliance; however, there are spatial and structural constraints that currently prevent the installation. Actual installation capability would be re-evaluated at a later date as the technology becomes available. The mechanical systems in the building would be updated and would comply with the Secretary of the Interior's Standards and Guidelines.

There would be No Adverse Effect to the Control Tower because the proposed project would strictly adhere to the Secretary of the Interior's Standards and Guidelines, and the resource would be returned to its original appearance and use to the greatest extent possible. Therefore, the proposed project would have a beneficial effect upon the Control Tower.

Dope Storage Shed

The Dope Storage Shed is an extant structure that has recently undergone minimal stabilization efforts. Under the Preferred Alternative, the exterior of the resource would be completely stabilized. Because it is such a small structure, it is not possible to reuse it for interpretive programs or displays. However, interpretive signage would be applied to the resource to show the visitor its role at the airfield. Also, it would further give the visitor a sense of the spatial relationships of the structures of the HCA, as well as contribute to the restoration of the appearance of the airfield as it looked in 1945. The routine maintenance and continued stabilization of the resource by the NPS under the Preferred Alternative would have No Adverse Effect to the Dope Storage Shed.

Entrance Gate

The Entrance Gate is an extant structure that has remained in good condition since its construction. Under the Preferred Alternative, the resource would undergo rehabilitation but continue in its historic use as the official entranceway to the HCA. There would be no major alterations to the resource, but it also would not be returned to its historic appearance. The

original bust of Robert Moton is no longer available so it would not be possible to recreate it for the Entrance Gate niche. Also, the historic lighting is no longer in existence. Therefore, the rehabilitation of the Entrance Gate would consist of minor repairs and a general cleaning. Upon project implementation, the routine maintenance and continued stabilization of the resource by the NPS under the Preferred Alternative would have No Adverse Effect to the Entrance Gate.

Fire Protection Shed

The Fire Protection Shed is an extant structure that has recently undergone minimal stabilization efforts. Under the Preferred Alternative, the exterior of the resource would be completely stabilized. Because it is such a small structure, it is not possible to reuse it for interpretive programs or displays. However, interpretive signage would be applied to the resource to show the visitor its role at the airfield. Also, it would further give the visitor a sense of the spatial relationships of the structures of the HCA, as well as contribute to the restoration of the appearance of the airfield as it looked in 1945. The routine maintenance and continued stabilization of the resource by the NPS under the Preferred Alternative would have No Adverse Effect to the Fire Protection Shed.

Flight Commander's Office (Cadet Class and Waiting Room)

The Flight Commander's Office is no longer an extant structure. It was demolished in 1985, and there is no longer any above ground evidence of the resource. Under the Preferred Alternative, a ghost structure of the original building would be constructed within the footprint of the historic location of the resource. The ghost structure would consist of a three-dimensional skeletal frame showing the location and dimensions of the original building. The original 1942 architectural drawing, produced by Edward C. Miller, for the Flight Commander's Office are still in existence. The structure is identified as the Cadet Class and Waiting Room on the 1942 architectural drawing. This drawing, in addition to historic photographs, allows for a reasonable reconstruction of the original height, width, and length of the Flight Commander's Office.

There would be No Adverse Effect to the Flight Commander's Office under the Preferred Alternative. Because the Flight Commander's Office is no longer an extant structure, the construction of the proposed ghost structure in its historic location would not affect the resource. Also, no NRHP eligible archeological sites were identified in this area during the Phase I survey so the ground disturbance associated with the construction of the ghost structure would not adversely affect the resource. The ghost structure, and its related visitor signage, would have a beneficial effect to the resource because it would be a visual representation of the non-extant

building and show its spatial relationship within the HCA. Therefore, because there is no integrity to affect, the proposed changes would have No Adverse Effect to the resource.

Guard Booth

The Guard Booth is no longer an extant structure. The date of demolition is unknown and there is no longer any above ground evidence of the resource. Under the Preferred Alternative, a ghost structure of the original building would be constructed within the footprint of the historic location of the resource. The ghost structure would consist of a three-dimensional skeletal frame showing the location and dimensions of the original building. While there are no architectural drawings available for the resource, there are several historic photographs that allow for a reasonable reconstruction of the original height, width, and length of the Guard Booth.

There would be No Adverse Effect to the Guard Booth under the Preferred Alternative. Because the Guard Booth is no longer an extant structure, the construction of the proposed ghost structure in its historic location would not affect the resource. Also, no NRHP eligible archeological sites were identified in this area during the Phase I survey so the ground disturbance associated with the construction of the ghost structure would not adversely affect the resource. The ghost structure, and its related visitor signage, would have a beneficial effect to the resource because it would be a visual representation of the non-extant building and show its spatial relationship within the HCA. Therefore, because there is no integrity to affect, the proposed changes would have No Adverse Effect to the resource.

Hangar Number One

Restoration and rehabilitation of Hangar Number One is proposed under the Preferred Alternative. The original 1941 architectural drawings of the resource have been located in addition to numerous historic photographs and original site plans to aid in the restoration and rehabilitation. The structure underwent stabilization in 2001 and included extensive work on the exterior brick masonry walls and the reconstruction of the corrugated metal roofing and wood rafters of the central hangar area with in-kind materials. The Preferred Alternative would restore the exterior of the resource to its 1945 appearance to the greatest extent possible using the Secretary of the Interior's Standards and Guidelines. Most of the original metal windows and doors were removed to an offsite storage location during stabilization and would be returned to their original locations upon restoration.

The hangar area and the Repair Shop in the interior of the resource would be rehabilitated to adapt to exhibit and interactive space. The interior floor plan would be kept as originally designed, with the perimeter rooms to be used for additional exhibit space with the exception of the two former heater rooms and the two Army Offices. These areas would be utilized by NPS staff and would not be open to the public. Public toilets would be located in the former Machine Shop, Maintenance Supervisor's Toilet and the Aircraft Record Room. The overhead balcony area would be rehabilitated to house the mechanical systems. The mechanical systems in the building would be updated and would comply with the Secretary of the Interior's Standards and Guidelines.

A finding of No Adverse Effect is recommended for Hangar Number One because the proposed project would strictly adhere to the Secretary of the Interior's Standards and Guidelines and the resource would be returned to its original appearance and use to the greatest extent possible. Therefore, the proposed project would have a beneficial effect upon Hangar Number One.

Hangar Number Two

Reconstruction of Hangar Number Two is proposed under the Preferred Alternative. The original 1942 architectural drawings for the resource are in existence and document not only the original materials but the floor plan configuration as well. The exterior of the resource would be reconstructed using in-kind materials to the original to the greatest extent possible. The existing original foundation would be reused whenever feasible. The interior would adhere to the original configuration while using more contemporary materials for construction. The main hangar space would house the visitor center, public toilets, and exhibit space. The perimeter rooms would temporarily be utilized by the Tuskegee University Department of Aviation Science for classrooms and project learning space until the Tuskegee Airmen National Center is constructed at a later date. The original boiler room would once again house the mechanical systems for the building, which would be adapted to the building as per the Secretary of the Interior's Standards and Guidelines.

There would be No Adverse Effect to Hangar Number Two under the Preferred Alternative. Because Hangar Number Two is no longer an extant structure, the reconstruction of the original structure in its historic location would not affect the resource. Any ground-disturbing activities associated with the reconstruction would not adversely affect the resource because no NRHP eligible sites were identified in the immediate area during the Phase I archeology survey. The reconstructed Hangar Number Two, and its related visitor areas, would have a beneficial effect to the resource because it would once again be a visual component within the HCA. Therefore,

because there is no existing integrity to affect and the original appearance of Hangar Number Two would be replicated on its original site, the proposed project would have No Adverse Effect to the resource.

Oil Storage Shed

The Oil Storage Shed is an extant structure that has recently undergone minimal stabilization efforts. Under the Preferred Alternative, the exterior of the resource would be completely stabilized. Because it is such a small structure, it is not possible to reuse it for interpretive programs or displays. However, interpretive signage would be applied to the resource to show the visitor its role at the airfield. Also, it would further give the visitor a sense of the spatial relationships of the structures of the HCA as well as contribute to the restoration of the appearance of the airfield as it looked in 1945. The routine maintenance and continued stabilization of the resource by the NPS under the Preferred Alternative would have No Adverse Effect to the Oil Storage Shed.

Physical Plant Warehouse

The Physical Plant Warehouse is no longer an extant structure. It was demolished in 1989, and there is no longer any above ground evidence of the resource. Under the Preferred Alternative, a ghost structure of the original building would be constructed within the footprint of the historic location of the resource. The ghost structure would consist of a three-dimensional skeletal frame showing the location and dimensions of the original building. While the original plan for the building is not available, there is a site plan from 1943 that shows the dimensions and floor plan of the structure. This plan, in addition to historic photographs, allows for a reasonable reconstruction of the original height, width, and length of the Physical Plant Warehouse.

There would be No Adverse Effect to the Physical Plant Warehouse under the Preferred Alternative. Because the Physical Plant Warehouse is no longer an extant structure, the construction of the proposed ghost structure in its historic location would not affect the resource. Also, no NRHP eligible archeological sites were identified in this area during the Phase I survey so the ground disturbance associated with the construction of the ghost structure would not adversely affect the resource. The ghost structure, and its related visitor signage, would have a beneficial effect to the resource because it would be a visual representation of the non-extant building and show its spatial relationship within the HCA. Therefore, because there is no integrity to affect, the proposed changes would have No Adverse Effect to the resource.

Skyway Club

Restoration and rehabilitation of the Skyway Club is proposed under the Preferred Alternative. The original architectural drawings of the resource have not been located, but there are numerous historic photographs and original site plans to aid in the rehabilitation. The structure underwent stabilization with the construction of a new roof on the rear half of the structure and comprised of in-kind materials to the original. The Preferred Alternative would restore the exterior of the resource to its 1945 appearance to the greatest extent possible using the Secretary of the Interior's Standards and Guidelines. Most of the original windows were removed to an off-site storage location during stabilization and would be returned to their original locations upon restoration.

The interior of the resource would be rehabilitated to adapt to uses similar to the original. The interior floor plan would be kept as originally designed and the former bar and social areas would be recreated to give the visitor a greater sense of place. Some of the rooms would be set aside for a future concession/gift shop area, and some would be utilized by NPS staff and would not be open to the public. The mechanical systems in the building would be updated and would comply with the Secretary of the Interior's Standards and Guidelines.

There would be No Adverse Effect to the Skyway Club because the proposed project would strictly adhere to the Secretary of the Interior's Standards and Guidelines and the resource would be returned to its original appearance and use to the greatest extent possible. Therefore, the proposed project would have a beneficial effect upon the Skyway Club.

Vehicle Maintenance Shed

The Vehicle Maintenance Shed is no longer an extant structure. It is not known when it was demolished, and there is no longer any above ground evidence of the resource. Under the Preferred Alternative, the resource would be represented by wayside exhibits and signage. Originally a ghost structure was suggested for this resource; however, because there are no architectural drawings available for the resource and its exact footprint cannot be determined at this time, the ghost structure is no longer considered a feasible action. If at some point in the future when further information is discovered, the construction of the ghost structure would be reconsidered.

There would be No Adverse Effect to the Vehicle Maintenance Shed under the Preferred Alternative. Because the Vehicle Maintenance Shed is no longer an extant structure, the

construction of wayside exhibits and signage would not affect the resource. Wayside exhibits and visitor signage would have a beneficial effect to the resource because it would be a visual representation of the non-extant building and show its spatial relationship within the HCA. Therefore, because there is no integrity to affect, the proposed changes would have No Adverse Effect to the resource.

Warehouse/Vehicle Storage Building

Rehabilitation of the Warehouse/Vehicle Storage Building is proposed under the Preferred Alternative. The original architectural drawings for the structure are no longer in existence so historic photographs and site plans would be used to rehabilitate the resource. The exterior would be returned to its 1945 appearance to the greatest extent possible. The Tuskegee blocks in the gable end walls would be returned to their original positions and the garage openings would be reconstructed. The interior of the building, which primarily consists of concrete block would be returned to the original floor plan but would not be open to the public. The building would return to its original purpose by housing NPS vehicles.

There would be No Adverse Effect to the Warehouse/Vehicle Storage Building because the proposed project would strictly adhere to the Secretary of the Interior's Standards and Guidelines and the resource would be returned to its original appearance and use to the greatest extent possible. Therefore, the proposed project would have a beneficial effect upon the Warehouse/Vehicle Storage Building.

Moton Field Cultural Landscape

Under the Preferred Alternative, the D.A. Williston historic landscape scheme would be utilized to return the landscaping to reflect the original appearance. D.A. Williston was the original landscape architect for the site, and his design contained a moderate amount of landscaping. Also under the Preferred Alternative, the historic tarmac would be restored, as per the Secretary of the Interior's Standards and Guidelines, and "Chief" Anderson Drive would be resurfaced. The historic pedestrian walkways within the HCA would be restored to provide for visitor circulation as well as aid in the restoration of the 1945 appearance. The historic curb and valley gutter would be preserved, and the 1945 tennis courts would be restored to a non-functioning interpretive level only. Historically appropriate site furnishings would be placed wherever original data are available. The original Artesian Well system, Fire Hose structure, and original historic pond would be restored or rehabilitated.

The visitor parking lot would be located outside of the viewshed of the HCA along Chappie James Drive. An Overlook Area from the hillside behind the Skyway Club would be constructed by clearing the overgrown vegetation so that the visitor can look down on the HCA of TUIAI and experience the site as a whole. A new walkway would be constructed between the parking lot and the HCA via the Overlook Area. A picnic area, the relocated visitor contact station, and the Tuskegee Airmen Memorial would be constructed between the parking lot and the Overlook, also out of sight of the HCA. The non-historic, non-contributing structures affiliated with the tenure of Tuskegee University's School of Veterinary Medicine would be removed upon project implementation, and the landscape would be returned to its 1945 appearance.

The restoration of the cultural landscape to the greatest extent possible is recommended as having No Adverse Effect to the resource as a whole. While there would be some new, non-historic construction, it would not impact the HCA. Planning to minimize the harm to the resource was taken into effect whenever possible.

Cumulative Impacts

The Tuskegee Airmen National Center (TANC) is planned for the area southeast of the proposed visitor parking lot of the TUIAI Preferred Alternative. This structure would be well outside of the viewshed of the HCA and would not be built until some time after the Preferred Alternative project implementation was complete. The TANC is not anticipated to adversely affect the HCA because it was taken into consideration during the planning phase, including the expectation of increased visitor attendance.

The adjacent Moton Field Municipal Airport consists of post-1950 structures and airport related features as well as the runway. The runway was originally shared between the airport and the pilot training school. The Moton Field Municipal Airport recently undertook an Airport Master Plan Study for the purpose of upgrading the facilities to include the installation of navigational aids and extending the runway from 5000 feet to 6500 feet. These improvements would be considered to have a beneficial impact to the TUIAI because the airfield would continue to service small planes only, whose presence adds a sense of place to the area and gives the visitors a more visceral experience. Also, as per the Preferred Alternative, a landscaping buffer would be planted to screen visitors from the contemporary visual intrusions of the non-historic airport.

Conclusions

Under the No Action Alternative, the historic resources of TUIAI would overall experience adverse effects. By leaving the structures and the landscape in their present conditions, demolition by neglect would occur to the resources over time. Under the Preferred Alternative, most of the effects to the resource would be considered beneficial. Of the two identified alternatives presented in this EA, rehabilitation of the HCA to its 1945 appearance to the greatest extent possible would be the least harmful to the resource. Rehabilitation would also enhance interpretation opportunities and preserve the site for future visitors. A summary of the individual impacts is included in Table 4-2. No impairment to park resources would occur from the Preferred Alternative.

Table 4-2: Summary of Effects to Cultural Resources by Alternatives

Resource	No Action Alternative	Preferred Alternative
Army Supply Building	No Adverse Effect	No Adverse Effect
Bath & Locker House	Adverse Effect	No Adverse Effect
Control Tower	Adverse Effect	No Adverse Effect
Dope Storage Shed	Adverse Effect	No Adverse Effect
Entrance Gate	Adverse Effect	No Adverse Effect
Fire Protection Shed	Adverse Effect	No Adverse Effect
Flight Commander's Office (Cadet Class & Waiting Room)	No Adverse Effect	No Adverse Effect
Guard Booth	No Adverse Effect	No Adverse Effect
Hangar Number One	Adverse Effect	No Adverse Effect
Hangar Number Two	No Adverse Effect	No Adverse Effect
Oil Storage Shed	Adverse Effect	No Adverse Effect
Physical Plant Warehouse	No Adverse Effect	No Adverse Effect
Skyway Club	Adverse Effect	No Adverse Effect
Vehicle Maintenance Shed	No Adverse Effect	No Adverse Effect
Warehouse/Vehicle Storage Shed	Adverse Effect	No Adverse Effect
Moton Field Cultural Landscape	Adverse Effect	No Adverse Effect
Cumulative Effects	No Adverse Effect	No Adverse Effect

4.2.4.1 Section 106 Coordination

In order to assess the potential effects of this project on the historic structures and buildings as well as the cultural landscape at TUIAI under the Preferred Alternative, the NPS entered into consultation with the Alabama State Historic Preservation Officer (SHPO). This consultation was based upon the criterion of effect and criteria of adverse effect found in the regulations of the Advisory Council on Historic Preservation. The Cultural Landscape Report and Historic Structures Report prepared for NPS for the site in 2000 as well as a description of the Preferred Alternative was previously sent to the SHPO for review (see Appendix C for letter dated February 6, 2004).

Additionally, a meeting with the SHPO and the NPS is planned where an overview of the project will be presented by NPS. A copy of the preliminary site design for the project will also be provided to the SHPO at this meeting. The NPS has determined that the implementation of the Preferred Alternative will not adversely affect TUIAI historic properties listed or proposed for listing in the National Register of Historic Places. The concurrence letter from the SHPO on this determination is included in Appendix C.

4.2.5 Hazardous Materials

Methodology

The following hazardous waste investigations were conducted previously at TUIAI and were reviewed to assess potential impacts of the alternatives:

- Historic review of past storage, use, waste disposal practices, and medical research activities including interviews with representatives of NPS and Tuskegee University
- Identified areas of concern
- Level I Assessment
- USACE conducted a preliminary investigation at TUIAI for underground storage tanks (UST)
- Level III (Phase II) investigation (groundwater and soil sampling)
- Environmental sampling and UST investigation (subsurface soil sampling)

No Action

Hazardous materials were previously investigated at TUIAI and all outstanding issues were resolved as summarized below under the Preferred Alternative. Since issues with the presence of hazardous materials at TUIAI have previously been resolved, the No Action Alternative would not result in impacts to park resources from hazardous materials. Furthermore, the No Action Alternative would not introduce any new hazardous materials onto the site.

Preferred Alternative

NPS previously investigated and resolved issues related to past storage, use, waste disposal practices, and medical research activities at TUAJ (Table 4-3). In addition, the implementation of the Preferred Alternative would not introduce any new hazardous materials onto the site; no impacts would occur to park resources.

Table 4-3: Summary of Past Storage, Use, Waste Disposal Practices, and Medical Research Activities at TUAJ

Area of Concern	Investigation	Results	Recommended Action
Skyway Club and the Bath and Locker House	Level III (Phase II) (Weston 2001)	All chemicals from these sites were removed (Williams 1999); no contaminants were found in soil or ground water at the Skyway Club (Weston 2001)	The NPS recommends no further action
Former lagoon area near the Skyway Club Building	Level I and Level III (Phase II) (Weston 2001)	Soil/GW (sludge) samples collected from the former lagoon area indicated the presence of carbon disulfide (Weston 2001); sludge was removed from the lagoon (McDarmont 2004)	The NPS recommends no further action
Storage and use of petroleum products and solvents during use as a Army air base	Level I Investigation and historic review (Weston 2001); soil sampling investigation (Weston 2003)	No contaminants were found above reporting limits and above EPA Region 9 PRGs (Weston 2003)	No remedial activities or further investigative activities are necessary (Weston 2003)
Storage and use of chemicals and biological materials by the Tuskegee University School of Veterinary Medicine	Level I Investigation and historic review (Weston 2001); soil sampling investigation (Weston 2003)	No biological or pathological agents were used at the site that would be considered a health hazard to humans; no infectious disease research was conducted at the site (Webster 1999); biological waste were removed from the site (Williams 1999); No contaminants were found above reporting limits and above EPA Region 9 PRGs (Weston 2003)	No remedial activities or further investigative activities are necessary (Weston 2003)
Potential offsite contamination by petroleum products and pesticides	Level I, Level III (Phase II) (Weston 2001); soil sampling investigation (Weston 2003)	Soil and GW samples collected from offsite areas indicated the presence of both carbon disulfide and GRO (Weston 2001); No contaminants were found above reporting limits and	No remedial activities or further investigative activities are necessary (Weston 2003)

Area of Concern	Investigation	Results	Recommended Action
		above EPA Region 9 PRGs (Weston 2003)	
Abandoned underground storage tanks	USACE preliminary investigation (Ennaco 1999)	Material from the tanks was removed and the tanks were filled (Brown 2004)	No further investigations or corrective actions in regard to the USTs as long as no water wells will be located within 500 ft of the former tank pits (Pierce 2001)
Airfield areas	Level III (Phase II) (Weston 2001)	No contaminants were found in the soil at this site (Weston 2001)	The NPS recommends no further action
Wastewater Treatment System	Level I Investigation and historic review (Weston 2001)	Sludge samples indicated elevated concentrations of VOCs, SVOCs, DRO/GRO, and metals (Weston 2001); the contaminants in the sludge are most likely confined to the tank systems (Weston 2001); sludge was removed from the tanks (McDarmont 2004)	The NPS recommends no further action
Lead, asbestos, and radiation	Groundwater investigation (Alabama DEM 2001); Soil sampling investigation (Weston 2003)	Lead contamination of the groundwater is present at the site (Alabama DEM 2001); no radiation above background levels were found and no asbestos was detected in soil (Weston 2003)	No further corrective actions except a distance limitation of 500 ft from the former tank pits of any future water well locations (Pierce 2001); No remedial activities or further investigative activities are necessary for asbestos or radiation (Weston 2003)
Unknown USTs	UST investigation (Weston 2003)	No USTs were found (Weston 2003)	No remedial activities or further investigative activities are necessary for USTs (Weston 2003)
Artesian Spring	Level III (Phase II) (Weston 2001)	No contaminants were found in the water sample at this site (Weston 2001)	The NPS recommends no further action

Cumulative Impacts

No negative cumulative impacts are associated with the Preferred Alternative and hazardous materials when added to the effects of other proposed projects in the vicinity of TUAI.

Conclusions

Past storage, use, waste disposal practices, and medical research activities at TUAJ were investigated through historic review, Level I Assessment, USACE UST investigation, Level III (Phase II) investigation, and further environmental sampling and UST investigation. All outstanding issues related to hazardous materials were resolved at TUAJ. Under the No Action or the Preferred Alternative, there would be no further introduction of hazardous materials to the TUAJ site; therefore, there would be no impacts to park resources from hazardous materials.

4.2.6 Visitor Experience and Park Operations

Methodology

The purpose of this impact analysis was to determine if the preservation and rehabilitation of TUAJ is compatible or in conflict with the purpose of the park, its visitor experience goals, and the direction provided by NPS Management Policies. Thus, these policies and goals were integrated into the impact thresholds.

The potential for change in visitor experience was evaluated by identifying projected increases or decreases in the preservation and rehabilitation of TUAJ and other visitor uses, and determining whether these projected changes would affect the desired visitor experience and result in greater safety concerns or additional user conflicts.

No Action

Under the No Action Alternative, existing uses and trends at TUAJ would continue to limit visitor experience. Currently, the site does not have adequate visitor facilities or interpretation of the unique cultural resources. Only a contemplative, imaginative experience is available for visitors in its current state, and the history of the site would remain known only to informed visitors and Tuskegee Airmen. Opportunities for appreciation and understanding the significance of the TUAJ would be restricted with the No Action Alternative. Limited and incidental visitation would occur in an unsafe environment due to the deteriorating condition of the buildings, and buildings would go unprotected from further decline (NPS Southeast Regional Office 1998).

Preferred Alternative

Implementation of the Preferred Alternative would increase the park's maintenance, curatorial, and administrative obligations. Factors in this assessment category help to focus the analysis on environmental consequences that potentially affect park operations and administrative functions.

Factors:

- Maintenance responsibilities;
- Parking facilities;
- Establish employee, volunteer, and visitor health and safety;
- Incorporate energy conservation policies and/or reduce energy consumption.

TUAI's enabling legislation provides specific guidance as to the park operations and maintenance, including the mandate that NPS "shall consult with Tuskegee University as its principal partner in determining the organizational structure, developing the ongoing interpretive themes, and establishing policies for the wise management, use and development of the historic site."

Park Operations

Proposed park facilities would include converting the temporary visitor center into a visitor contact station, constructing parking, access roads, pedestrian walkways/trails and a variety of outdoor and indoor exhibits. The parking facility would consist of 350 car spaces and 12 bus spaces, with one entrance and one exit to the parking lot from Chappie James Drive. Maintenance activities would increase with the addition of more buildings and visitor services, and the increase in visitation would create more litter and waste than current conditions on site. Several components of the Preferred Alternative would be designed to minimize maintenance, such as using electrical and mechanical equipment that requires minimal maintenance, and designing the picnic area structures and surfaces to decrease the need for extensive maintenance (Hartrampf 2004b). Overall, park maintenance and operations would be increased over current levels, which would increase staffing requirements from two full-time employees to four employees in 2005 and eventually five total employees by 2006. This would result in beneficial impacts overall, as an improvement in park operations would aid in meeting the need and purpose of the proposed action, which is to commemorate the contribution of the Tuskegee Airmen during World War II.

Visitor Experience

Visitors to NPS sites generally come as individuals or in small groups. Summer visits to an NPS site often increase visitor statistics when families tour locations while on vacation. Visits to TUA I would likely follow the same pattern and also reflect special interests in World War II history, African-American history, and/or aeronautical history, as well as history in general.

The visitor experience at TUA I is intended to be a formal interpretation format and would be greatly enhanced from the current conditions by the addition of more interaction with NPS staff and a wider variety of exhibits displayed in a broad range of media. Visitors would be able to walk around the HCA and enter certain buildings designated for interpretive or museum use. Both indoor and outdoor exhibits would be added to the existing and proposed elements of the HCA. The NPS would construct a new shelter/pavilion with a contact area outside of the HCA to introduce visitors to the site upon arrival. The addition of these park features would result in major beneficial impacts to visitor experience at TUA I.

The Interpretive Emphasis focuses on the story of the Tuskegee Airman, especially the Moton Field training experience. However, this story must be related to the larger story of the history of African-Americans in the United States military and their connection to the civil rights movement. This emphasis would include the training process for the Tuskegee Airmen and the strategic role of the Tuskegee Institute (now Tuskegee University) in that training, as well as the activities of the Tuskegee airmen during World War II and their role in desegregating first the military and then the larger society.

In addition to the proposed interpretative functions, visitor services would include parking, public restrooms, food service areas, picnic grounds, walking trails, and a scenic overlook of the HCA to include some commemorative features, such as a “Chief Anderson” statue and a “Tuskegee Airmen Memorial,” all of which would add to an enhanced visitor experience over current conditions.

Visitor Accessibility

Accessibility for visitors with disabilities would be considered during the design process for the HCA and the Visitor Services Area. All structures, parking facilities, visitor circulation paths and vehicles used to transport visitors in the future would meet the requirements of the Americans with Disabilities Act (ADA). One of the buildings, the Control Tower, requires an elevator for ADA access to the upper stories; however, this option is not technically feasible at

this time due to spatial and structural constraints within the building. Some features of the historic structures, such as door frames, would be slightly modified to accommodate ADA accessibility; however, this would not interfere with the overall integrity and interpretation of the extant historic structures.

Safety

The Preferred Alternative would include upgrading all deteriorating structures to proper building standards and would also incorporate safety features, such as installing a safety stop on the hangar doors to prevent visitors or children from being able to operate the doors. Proposed designs and structures would comply with fire safety, mechanical and electrical codes and regulations. In addition to these mandatory safety requirements, further safety precautions would benefit overall visitor experience, and would not result in an impairment to park resources.

Cumulative Impacts

Cumulative impacts to park operations may occur due to an increase in tourists visiting the region from the implementation of the In-Park Transportation System and the Tuskegee Airmen National Center (TANC). There would be an increase in the park's maintenance, curatorial, and administrative obligations when these proposed projects are constructed in the future.

The TANC would provide additional visitor experience when constructed. It would provide a full-scale military museum and major exhibits with period military aircraft and equipment.

Conclusions

In summary, the Preferred Alternative would have major beneficial impacts on visitor experience. The visitor experience would be a formal interpretation format and would be greatly enhanced from today's experience. Visitors would be able to walk around the HCA and enter certain buildings designated for interpretive or museum use. In addition to the interpretative functions, the Visitor Services Area would include parking, public restrooms, food service areas, picnic grounds, walking trails, and a scenic overlook of the HCA to include some commemorative features, such as a "Chief Anderson" statue and a "Tuskegee Airmen Memorial." The Preferred Alternative would also have major impacts on park operations with an increase in the park's maintenance, curatorial, and administrative obligations.

The No Action Alternative would not result in impacts to park operations or visitor experience. No impairment of park resources would result from either alternative.

4.2.7 Irreversible and Irretrievable Commitment of Resources

Irreversible

Irreversible commitments are those that cannot be reversed, except perhaps in the extreme long term. The Preferred Alternative would considerably reduce the deterioration of the historic structures at TUA I.

Irretrievable

An irretrievable commitment of resources refers to the effects to resources that, once gone, cannot be replaced (NPS 2001a). Proposed new construction in the Visitor Services Area would result in additional walkways, paved parking, and other permanent visitor service infrastructure. Vegetation removal, soil disturbance, pond construction, and the addition of impervious paved areas would occur in the Visitor Services Area and the HCA if the Preferred Alternative is implemented, which may cause impacts to natural resources that may not be retrieved in the long-term.

4.2.8 Unavoidable Adverse Environmental Effects

These are impacts that cannot be fully mitigated or avoided. Implementing the Preferred Alternative would cause removal and rehabilitation of vegetation to return the site to the original 1944 landscape plan. Native species would be planted to return the site to the level, open terrain of the site in the early 1940s.

Ground disturbance at the site would be associated with construction of the visitor services infrastructure.

Sensitive design and construction practices would reduce the visual impact of the visitor services infrastructure as well as non-historic elements (i.e., air conditioning units, restrooms, utilities) located in the HCA.

4.2.9 Local Short-Term Uses and Maintenance/Enhancement of Long-Term Productivity Compliance With Environmental Requirements

For the purposes of this section, short term is defined as the time span for which the Development Concept Plan is expected to be effective (5-10 years), and long term is defined as a period beyond that time.

In the Preferred Alternative, the short-term benefits of providing improved visitor services; improved program capabilities; greater public access to the site; and improved information on museum collections are facilitated by the restoration and rehabilitation of the site.

CHAPTER 5.0 CONSULTATION AND COORDINATION

5.1 AGENCY CONSULTATION

Scoping is the effort to involve agencies and the general public in determining the scope of issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates issues determined to be not important; allocates assignments among the interdisciplinary team members and/or participating agencies; identifies related projects and associated documents; identifies other permits, surveys, consultations, etc. required by other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping includes consultation with any interested agency, or any agency with jurisdiction by law or expertise to obtain early input.

At the beginning of 2004, the following agencies were sent letters requesting consultation and comments regarding the proposed actions at TUA I that are discussed within this DCP/EA:

Attn: Bruce Miller
U.S. EPA, Region 4
Office of Technical Support
Environmental Accountability Division
Sam Nunn Atlanta Federal Center
61 Forsyth St, SW
Atlanta, GA 30303
Phone (404) 562-9679

Attn: Larry Goldman
U.S. Fish & Wildlife, Region 4
Daphne Field Office
1208-B Main Street
P.O. Drawer 1190
Daphne, AL
Phone (251) 441-5181

Attn: Zona Beaty
U.S. Department of Agriculture
Natural Resources Conservation Service Office
Tuskegee Service Center
106-1 Torrence Rd
Tuskegee, AL 36083-5922
Phone (334) 727-3763 est3

Attn: Robert Montgomery
Alabama Forestry Commission
Southeast Region
1696 US Hwy 29N

Auburn, AL 36830
Phone (334) 727-3783

Attn: Debi Thomas
Alabama Department of Environmental Management
Environmental Management Commission
P.O. Box 301463
Montgomery, AL 36130-1463
Phone (334) 271-7700

Attn: M. Barnett Lawley
Alabama Department of Conservation and Natural Resources
Commissioner's Office
64 N. Union St, Suite 468
Montgomery, AL 36130
Phone (334) 242-3486

Attn: James H. Griggs
Alabama Department of Conservation and Natural Resources
State Lands Division
64 N. Union St, Suite 468
Montgomery, AL 36130
Phone (334) 242-3484

Attn: Gary H. Moody
Alabama Department of Conservation and Natural Resources
Wildlife and Freshwater Fisheries, Division
Chief Wildlife Section
64 N. Union St, Suite 468
Montgomery, AL 36130
Phone (334) 242-3469

Attn: Stephen M. Cauthen
State of Alabama
Soil & Water Conservation Committee
RSA Union Building
100 N. Union St, Suite 334
P.O. Box 304880
Montgomery, AL 36104
Phone (334) 242-2620

Attn: Julie Cook
Land Trust of East Alabama
P.O. Box 225
Auburn, AL 36830
Phone (334) 737-2088

County of Macon
606 North Dibble St
Tuskegee, AL 36083
Phone (334) 724-0811

Attn: James H. Fitzgerald
Federal Aviation Administration
Alabama Northwest Florida Flight Standards District Office
1500 Urban Center Drive
Suite 250
Vestavia Hills, AL 35242

Attn: Mr. Bruce Baughman
Alabama Emergency Management Agency
5898 County Road 41
P.O. Drawer 2160
Clanton, Alabama 35046-2160
Phone (205) 280-2200

Attn: Habitat Conservation Division
National Marine Fisheries Service (NMFS)
Southeast Regional Office (SERO)
9721 Executive Center Drive North
St. Petersburg, FL 33702
Phone: 727-570-5317

Attn: Curtis M. Flakes
U.S. Army Corps of Engineers, Mobile District
Planning & Environmental Division
P.O. Box 2288
Mobile, AL 36628-0001

Attn: Mr. Randall Estes
Alabama Department of Transportation
Sixth Division
1525 Coliseum Boulevard
P.O. Box 8008
Montgomery, AL 36110
Phone (334) 269-2311

Attn: Mr. Michael C. Gilbert
Alabama Indian Affairs Commission
770 South McDonough Street
Montgomery, AL 36104
Phone (334) 242-2831

Responses were received from several agencies and organizations during early consultation. Copies of all agency responses received are included in Appendix C.

1.0 PUBLIC INVOLVEMENT

A public meeting for this DCP/EA was held in Tuskegee, Alabama on March 4, 2004 where there were 50 attendees. More than 400 individuals or organizations were mailed a scoping brochure describing the project and information on the public meeting, and a press release was also published to advertise the event. Public comments received during the public meeting are summarized below in Table 5-1. The comments generally support the development of TUA I and encourage NPS to implement the proposed development as soon as possible. The scoping brochure and press release are included in Appendix B. The distribution list, list of attendees, and written comments received are located in the park's administrative file.

The DCP/EA will be distributed for public and agency review and comment for a period of at least 30 days.

Table 5-1: Public Comments on the Tuskegee Airmen National Historic Site

Name	Company/Organization and Title	Address	Contact Information	Comments/Suggestions
Deborah Gray	Tuskegee Human & Civil Rights Multicultural Center	PO Box 830768	Phone: 334-724-0800 Fax: 334-727-5877 Email: gray.deborah@att.net	Identify and describe previous usage of non-historic building depicted/referenced on Figure NN2 (chart). What will happen to the building?
				Automobile access to municipal airport. How to get automobile to existing airport?
				I dislike the use of the term anonymous Airman or portable display.
DeRoald R. Hopkins	First Tuskegee Bank/ Executive Director of Investment Services	301 N. Elm St. Tuskegee, AL, 36083	Phone: 334-727-2560 Fax: 334-727-1278 Email: deh@firsttuskegeebank.com	Please expedite further meetings and tangible deliverables between National Park Service and the Tuskegee City Council to come together on terms for the National Historic Site and Moton Airfield.
J.C. Cunningham	Macon County Commission/ Macon County Commissioner (District 4)	Macon County Court House	Phone: 727-5120	Keep going in the same view. This type pf positive image is vital to the future of this county.
Dolly A. Caldwell	---	2706 Auburn St. Tuskegee, AL 36087	---	We are looking forward to this historic site. If the number of visitors is considerable, will Chappie James or the main highway be expanded or widened?
				We are aware of the positive impact this will have on our community, so we are asking that you step up this project and lets get it done now.
				How will local minority contracts be awarded? How will we know what contracts are being awarded and when? Is there a certain percentage of jobs that will be community awarded once the project is completed?

2.0 LIST OF PREPARERS

U.S. Department of the Interior, National Park Service, Southeast Regional Office

Jami Hammond, Southeast Regional Environmental Coordinator
Tracy Stakely, Cultural Landscape Program
Paul Hatchett, Architect
Cherry Green, Wetland Ecologist

Tuskegee Airmen National Historic Site

Catherine Farmer-Light, Acting Superintendent

Tuskegee Institute National Historic Site

Tyrone Brandyburg, Chief of Interpretation
Juan Gomez, *formerly* Chief of Maintenance

EA Engineering, Science and Technology

Suzanne Boltz, Project Manager
Tracy Layfield, Environmental Scientist
Sarah Koser, Natural Resources Specialist
Mary Alice Koenke, Natural Resources Specialist
Danielle Bower, Environmental Planner
Dan Raley, Air Quality Specialist

New South Associates

Karen Serio, Historian